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**EXAMINATION OF THE RELATIONSHIP  
BETWEEN MATERIALISM, VALUES,  
VOLUNTARY SIMPLICITY AND SOCIAL  
MEDIA USE AMONG TEENAGERS**



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doctoral dissertation

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## 1. INTRODUCTION

The acquisition of tangible goods, the use of services and the accumulation of experiences are an integral part of our lives. As a member of a consumer society, we are sometimes critical of the importance of our belongings, car or smartphone beyond their function. We are often faced with how much we desire an object or consumer experience. Sometimes that desire is so overwhelming that we make unreasonable decisions. We cannot be sure that everything we buy is necessary for us, so we often feel compelled to consume. We are reassured by the explanation that the world, the media, the behaviour of our fellow human beings trigger the need to buy. This is perhaps the simplest answer to our constant spending and renewal of consumer desires. It is important to accept the fact that the desire to acquire and possess goods is a deep-seated human trait and the need for consumption must be accepted. Acquisition is not an externally influenced action or a superficial purpose in life, but an integral part of human nature. Since our needs have long been met not through the production of goods but through their acquisition, it is worth thinking of consumption as part of a large system, a network of actions and experiences ranging from our individual well-being to our community relationships. The correlation system, which I examine in the present dissertation, has been compiled along similar ideas as the experience of several antecedent studies.

According to Belk's (1985) definition, **materialism**: *"The importance a consumer attaches to worldly possessions. At the highest levels of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction and dissatisfaction."* (Belk, 1985, p. 265.).

The concept and context of materialism, the work of Belk, Richins, Chaplin, Roadder John, and others, had a great impact on my first experimental research from the beginning of my doctoral studies. As I focused on the research of adolescents during the doctoral program and in the dissertation, the research of young adults and adolescents was also the focus of the literature. The broad and comprehensive literature on materialism soon led to the realization that the system of antecedent variables and consequences was well known. However, understanding the broader

context of materialism and its adult consequences, I still considered it important to examine it in a novel approach.

This is how the research series examining the relationship between materialism and values was compiled, the results of which are also reported in the present dissertation. **Values**, as cultural principles, express behaviours that are considered desirable by their bearers. Value concepts are used differently in different disciplines. In consumer research, values are standards for judging an individual's own behaviour and attitudes, as well as for judging others, which are internalized during socialization (Hofmeister-Tóth, 2014). Values not only embody the deeper layers of consumer behaviour, but also provide a link between materialism and the socialization processes that take place at a young age. Although the literature provides results regarding the relationship between materialism and values, the field is less-well researched. The fact that no similar research has yet been carried out with the Schwartz value set in Hungary further strengthens the novelty of the dissertation.

Also, by processing the literature on materialism, it was recognized that materialism and **social media** use are less researched areas. The identification of this research gap is also important because, as can be seen from the relevant chapters, social media platforms are part of the daily routine in adolescence and one of the (virtual) arenas of socialization due to the phenomenon of social comparison based on their visibility. A similar comparison has not only never been carried out in Hungary but worldwide neither.

The social message of the dissertation is based on the context explored in the dissertation on how attachment to material goods is related to a more conscious, small-scale consumer behaviour. Involvement of **voluntary simplicity** was needed to examine this. Using the idea of Gregg (1936), Elgin and Mitchell (1977) argue that voluntary simplicity is a life that is outwardly simple but inwardly rich, restrained and environmentally conscious. This approach represents a return to a human-scale living space for spiritual growth in the community. Although at first reading, voluntary simplicity appears as the opposite of materialism, the literature and our own research show that this is far from clear. Examining the direction of the relationship is also relevant because, like the values, we are confronted with a less researched but more important relationship for the future.



Finally, it is my personal assumption that personal values and materialism are already formative forces at a young age which can play a role in decisions such as school choice. My assumption is that young people, for whom material possessions are more important, prefer a type of school (vocational education) which expects them to establish an independent existence as soon as possible. In addition, since neither materialism, values, nor voluntary simplicity can be independent of a person's financial situation, the dissertation presents and compares the income status, satisfaction, and relevant parts of the spending structure of people living in different economic regions of Hungary.

The scientific aim of the dissertation is to contribute to our knowledge, as these are lesser or not at all researched connections. The practical value of the thesis is to understand the materialism value preferences and willingness to forgo of a birth cohort (2003-2007) whose members will soon appear on the commodity market as consumers with independent incomes and freedom of choice. Openness to voluntary simplicity weak materialism and the demonstration of collective value preferences would send an encouraging message to those working to strengthen the conscious, responsible behaviour of consumers. If the opposite is true, the correlations can point out the values, motives and motivations along which attitude formation can be successful.

## **2. THEORETICAL ASPECTS OF THESIS TOPIC**

However, consumption and consumerism are not just acts of acquiring and possessing goods, but also related forms of behaviour. Lunt and Livingstone (1992) noted that consumption is a way of participating in society for ordinary people, and that personal identities are also related to consumption. Simányi defines consumer society as *“a community whose members are primarily consumers, and through these consumer roles social relations, relationships, identities are realized”*. (Simányi, 2005. p. 173).

Consumption has now finally become part of self-determination and identity formation. Goods can strengthen self-image, be an important basis for comparison with members of the social environment, and help the individual to communicate with

the world. According to Don Slater (1997), the joy of acquisition and possession is the best reflection of the ideal of freedom that modern society can provide for the individual. The consumer decision is a free, autonomous decision. According to Zygmunt Bauman (2005), the consumer society is an ideal based on the possibility of free individual choice, to which areas of life such as social relations, starting a family, working, professionalism or leisure were subordinated. These subordinated areas used to be independent of consumption, but to commit to every single consumer decision, we inadvertently take our freedom to consume into account.

Prior to the 80's, the view of the producer society prevailed. For individuals, active participation and fulfilment in production were ideal, and work in itself was a goal. After decades of transition, nowadays work has become more of a tool to serves consumption. Bauman (2005) noted out the difference between modern (producer) and postmodern (consumer) society from the perspective of goals and the tools that lead to them. In modernity, the individual had to stand primarily as an employee, taking part in the production and distribution of goods. He had to get by on the rewards provided for that particular profession. The possibilities and limits of consumption (freedom to choose) were determined by the degree of well-being arising from the profession and occupation. A lifelong profession and its fulfilment was more important than the power of the moment, to gain experience, because work served as a goal. In contrast, in postmodernity, work is more of an asset value that serves to assert itself as a consumer. The individual first determines what kind of life he or she wants to live as a consumer, what goods and experiences he or she would like and what the financial conditions are. This has a significant impact on what profession you choose and how committed you are to it. The consumer lifestyle includes not only current but also future expectations and material assumptions. How much money will you need? What kind of car will you want to drive? How big and what kind of house would you live in? The fundamental difference between the functioning of modern and postmodern society is that in modern producers the creation of a consumer who is committed to his or her work is decisive, while in postmodern consumers the creation of a consumer following his or her own material preferences is paramount. The former offers careers (profession, occupation, and profession), the latter promises the fulfilment of ever newer desires. The former uses the tools of normative regulation, it supports the desired way of life - a hard-working and loyal employee, a disciplined individual - and penalizes deviances.

In contrast, it conveys the postmodern ideal, the ideal of the consumer, who is free in his or her decisions. The failure of this ideal equals the failure of individual performance.

Behind the tangible goods and services that play a central role in consumption are complex meanings, symbols, rites and identities which are of particular importance in postmodern consumer society. While the possession of symbols and the fact of identification can lead to happiness and pride, limited individual possibilities can cause feelings of failure and shame. Successful and less successful consumer roles significantly contribute to the development of an individual's self-image and character. However, it cannot be ignored that the symbols and meanings are the reflections of the subject in the material reality, for the individual, who attaches more or less importance to things, endowing them with special qualities. It is an insoluble and presupposing dialectic, in other words, an inseparable, mutually explanatory entity between the external object world and the human subject. The subject inadvertently shapes his physical environment into his own image, anthropomorphizing material reality. Consequently, the excessive importance of material goods cannot be attributed to a fault arising from human weakness or to some kind of deliberate manipulation of external forces, since the subject can express and define himself within the limits and conditions of the material world.

According to Mihály Csíkszentmihályi (1993), dependence on objects is also justified because the material reality surrounding an individual is not only a criterion of biological existence, but also an important condition of psychological stability. In the absence of the existence and knowledge of objects or their imagination, thoughts and ideas are difficult to control and develop. Because the self (ego) is a vulnerable part of consciousness that is also vulnerable to external conditions, it easily enters a state of entropy, a mess. The material environment and the consumer goods, play an important role in the restoration of order, which basically contributes to the objectification of the self, self-consciousness and the restoration of the internal order in three ways. On the one hand, they embody power, vitality, and social status through certain meanings, and on the other hand, due to their deeper layers of meaning, they help to maintain and restore the continuity between the past and the present, such as souvenirs do. Lastly, thanks to their complete system of meaning and symbolism, the individual can be assured of his or her role in the social network. These three functions

of objects reinforce the sense of existence and ensure the imprint of the subject in object reality. Without material possessions, existence is unthinkable. No matter how few material things are available, the main reason for their importance and our dependence on them is that the uncertainty and variability of consciousness can be offset by the strength and immutability of objects.

Although dependence on material goods is as old as humanity itself - it is enough to think only of physiological needs - with the expansion of consumer society, the human-object relationship has changed significantly. According to Bauman (2001), the reason for the change is to be found in the changed position of the individual as a consumer. While in the past everyone who wanted to benefit from goods had to contribute to the production and availability of them, this is no longer the case in consumer society. As the boundaries of local production limited consumption, the era of infinity, the freedom to choose between goods, began with its disappearance and the emergence of global commodity abundance. With the transformation of norms and the emergence of ever-changing and influential demands, consumption has been freed from its functional obligations, independent of the laws of utilitarianism, and has become one of the ways to achieve pleasure, and well-being. Consumption has become self-serving and is closely intertwined with the fulfilment of an individual's self-image. Bauman draws attention to a crucial preconception against the consumerism of our time: it is not just about *satisfying* needs, it is about the *desires and aspirations of consumers*. Although they are more closely or loosely related to specific needs, while needs are usually well-coordinated constraints and can result in planned action, desires are unpredictable, transient and extremely variable phenomena. While needs lead to the temporary elimination of oneself, desires chase the individual for a momentary illusion of fulfilment. In addition, the desire to acquire, possess, or experience material possessions is not necessarily satisfactory.

This idea is reinforced by Colin Campbell's (2018) notion of consumer hedonism, which deals with the issue of gaining ever greater levels of pleasure through consumption. Although hedonism and the unsatisfaction of desires were well known in the history of humankind before the consumer society, they did not play as important a role in everyday life as they do today. Today's consumer society is based on the apparent, temporary gratification of desires as desires cannot be permanently eliminated. Occasionally, the consumer feels satisfaction and reassurance, but soon his

desires recur. The constantly renewed range of products and services strengthens this cycle. The subject of interest is constantly changing, barriers are falling, and the possible ways of consumption are multiplying. The consumer easily finds himself in a spiral of desire for novelty: things acquired and used yesterday symbolize the past; time has passed over them, not modern. While the consumer wants to “perform” as a “good and successful” consumer, reality never brings ultimate satisfaction, as renewable supply poses new challenges. As a result, increased dissatisfaction has become a feature of our time.

Because consumers have different desires, the demands they make are also diverse. In order to satisfy the members of society, the actors of the supply side (manufacturers, traders, suppliers) must satisfy the most diverse needs in the same standardized way, in addition to the constraints of economies of scale. Strange as it may sound, the streamlined processes of the most successful firms are based on the irrationality of their consumers (Bauman, 2001), finding the key elements that maximize the satisfaction of a wide variety of individuals who purchase the same object and use the service. However, it is not just companies that may be interested in increasing consumer satisfaction, it is also important for employers and state institutions if the employee, the citizen, is satisfied. Stakeholders cannot ignore the fact that in postmodernity, their customers and employees consider their performance so far primarily as consumers, through their consumption opportunities.

### 3. THE SIGNIFICANCE OF MATERIALISM IN CONSUMPTION THEORIES

By the second half of the XIX. century, the consumer lifestyle that had become commonplace as a consequence of the Industrial Revolution had affected many thinkers. The culture of shopping and consumption, which had never been experienced before, fundamentally changed the relationship between the individual and goods, the symbolism of material goods, and multiplied the underlying meaning of acquisition and possession.

**Materialism** means the importance of acquiring and possessing tangible goods and expresses the consumer's commitment to tangible goods. Russel W. Belk (1988; Belk, 1983) draws attention to the fact that a thought-provoking explanation of the dilemma of materialism as a subject-object, a person, and an object can already be found in **Karl Marx**. In Belk's interpretation, Marx's findings on the fetishization of goods and the alienation of the individual from the means of production are in part still valid today. Marx attacked consumers for making material goods almost magical through their anthropomorphization (personalization) and placing them at the center of their lives as a source of their happiness; while, according to Marx, only meaningful and properly remunerated work can make a person happy. In contrast, capitalism makes it impossible to live true happiness, as the individual moves away, alienates himself from the means of production, the process of producing goods, and has no opportunity to identify with the goods produced. Ultimately, he becomes alienated from himself, since what the individual does not create cannot be entirely his own, so he cannot be himself. Based on this, according to Belk (1988), Marx's theory of consumption is action-oriented.

**Thorstein Veblen** was one of the first to answer the question, "What kind of goods do we consume and why?" namely through the role of social strata and classes. Although the conclusions of his book *The Theory of the Leisure Class* (1899) relates to North American society at the end of the nineteenth century, the validity of the leakage theory is evident in everyday life still today. For Veblen, the main function of consumption is to express one's status in society, belonging to a given class. On the one hand, intra-group competition characterizes individuals: they want to be

differentiated from their peers, and on the other hand, they imitate the consumer habits of the upper classes. It is true that we cannot talk about declared social classes nowadays, but the individual social strata can be identified, the differences between them and the imitation (leverage) of consumer habits can be well observed.

In the first half of the XX. century, theories of consumption were extremely diverse. Psychological processes (Freud et al.), religion (Weber), philosophy (Hobhouse, McDonald), social order (Tawney), modern life (Benjamin), gifts (Mauss), and the influence of mass culture, among others, played a key role (Adorno, Horkheimer). The 1980s were decisive for the future of consumer research. **Pierre Bourdieu's** book *Distinction* (1987) has grown into a fundamental work in consumer theory. Based on his empirical research, unlike previous thinkers, he does not consider the social stratum represented by the individual as the starting point and accelerator of consumer behaviour, but on the contrary: the constraints and opportunities arising from the individual's living conditions become an internal, personal *habitus*. Social strata are retained because of individuals in the same position with the same *habitus*. In fact, as a result of the consumer socialization process, the individual unintentionally becomes part of his own consumer stratum. Consumer behaviour is automated in his stratum, thereby strengthening the stratum.

In his theoretical work, *Possessions and the Extended Self* (1988), **Russel W. Belk** synthesized the projections of the acquisition and possession of material goods through philosophical works. To understand the role of goods in interpreting existence, it juxtaposes three perspectives: *doing*, *having*, and *being*. The Marxian conception, already presented above, is *doing-oriented*: the purpose of human existence is meaningful work. In the state of communism, people have access to the goods produced through work according to their needs. In Belk's interpretation, the spirituality of **Jean-Paul Sartre's** book *Being and Nothing* (1943) is "*having*" - oriented. According to Sartre, work in the Marxian sense is merely a temporary state or manifestation of the desire to possess or exist. Sartre focuses on possession instead of action. According to him, there is only one reason to increase our wealth: to be bigger, to expand the physical limits of our existence. We can only decide how big we are by seeing our possessions. To be and to have are not the same thing, but they are inseparable: all the goods we possess are essential to knowing who we are. People seek, express, reinforce, or define themselves through their possessions. According to

Belk, **Erich Fromm** in one of his major works *To Have or To Be* (1976), puts “being” at the center of his thinking: goods, experiences, time itself are all goods to be acquired which together serve existence. Without material goods, existence is unthinkable not only for physiological reasons but also philosophically: “*If I am what I have, what if I lose it?*” Fromm, just like Marx, attacks hedonism, the great attention paid to possession, and the unrequited work carried out.

Belk's merit is not only to compare consumer theory with other sciences (philosophy, psychology, religion), but also to introduce materialism into marketing research. In his much-cited work, *Worldly Possessions: Issues and Criticisms* (1983), he asked three questions to understand the subject-object relationship: *Is acquisitiveness unavoidable? Is possessiveness unavoidable? Does altruism exist?* Belk characterized the relationship between human and goods from several approaches, consolidating the term materialism and materialism in consumer research. Although before his major works others in the field of marketing had dealt with materialism (Furby, Moschis and Churchill, Csíkszentmihályi and Rochberg-Halton), later Belk's theory became decisive. Belk provided an interpretive framework for materialism by describing it as a **personal trait** of the individual. He developed a widely accepted scale of materialism that made the correlations of materialism with personal trait explorable. The above three questions about materialism can be answered through three personality traits: desire for possession, selfishness, and envy.

Later, **Marsha Richins** and **Scott Dawson** (1992) shed new light on materialism. Until then, the measurement tools used to examine materialism were considered statistically quite unreliable and lacked the psychometric validity of materialism scales. Although Belk's scale was an exception to their criticism, Richins and Dawson did not agree with the basic thesis that materialism is a personality trait. According to them, materialism rather reflects the mindset of the individual and expresses his or her attitude towards the acquisition and possession of tangible goods. This is because, for materialistic people, acquisition and possession are the most important, they fundamentally determine their way of life, their relationship to the world. The desire to acquire has an organizing and directing power, and the efforts to satisfy desires play a central role in an individual's life. Richins and Dawson noted that the desire to acquire and possess can shape an individual's lifestyle. This aspect fits into the value concepts defined by Milton Rokeach and other value researchers;



therefore, materialism can be defined as **value** (Richins & Dawson, 1990; Fournier & Richins, 1991). They noted the effect of materialism on behaviour, stressing that the more materialistic an individual is, the more he pays attention to the quality of the goods he wants to acquire, and will even manage his time to increase his purchasing power (e.g., he is willing to work more at the expense of his free time). All this can lead to differences in behaviour, the examination of which contributes to the understanding of the phenomena of consumer society. Based on the available research findings and theories, Richins and Dawson noted four fundamental differences between more materialistic and less materialistic individuals. The acquisition and possession of goods is more important to more materialistic individuals; they are more self-centred; due to their relations with objects and materials, their lives are more complex and tense; and they are generally less satisfied with their lives. Based on the discrepancies and eliminating the statistical and psychometric shortcomings of the materialism scales, they developed their own measurement tool, which significantly contributed to the acceptance and spread of materialism in marketing research. The Richins-Dawson scale soon gained great popularity among professionals and is still the most widely used tool to this day. The scale examines the significance of objects through three dimensions: acquisition *centrality*, material *success*, and *happiness*. Richins (2004) also developed shortened versions of the questionnaire, which originally contained 18 statements, with 15, 9, 6 or only 3 statements, of course taking into account statistical and psychometric requirements. Although newer measurement tools have emerged over time (Kasser & Ryan, 1993; Goldberg, 2003; Bottomley, 2010; Manchanda, 2015), these were primarily aimed at meeting specific target groups or data collection conditions.

**Tim Kasser** (2002), based on his own research results and processing a significant amount of psychological research material, shed new light on materialism. His book, *The High Price of Materialism* is aimed primarily at a wider readership and is significantly different from academic literature, but it can be considered a milestone. Kasser (2002) had already identified the variables that still dominate the scientific discourse on materialism. The explanation of the relationship between personal well-being, spiritual needs, happiness, insecurity, and self-esteem with a material attitude is important for reflecting on individual and community dilemmas and conflicts in society. Kasser (2002) sharply criticizes the messages of capitalist cultures and the misleading, superficial, and material goals of life that can later lead to mental disorders, personal burnout and dead ends. It is important to note that Kasser treats materialism as a value in his work, and thus it fits better into the concept of Richins and Dawson. The Aspiration Index, developed jointly with Richard Ryan (Kasser & Ryan, 1993), can be used to examine people's general values and goals, among which the relative place of material values and goals is determined. Materialism is a value for well-being, possession, image-appearance, and social status, but Kasser (2014, 2004, 2002) at several junctions calls it a materialistic lifestyle. Kasser's conclusions are still valid today in that people who are more materialistic have poorer physical and mental well-being, lower levels of self-fulfilment and vitality, are more prone to depression, anxiety, destruction of their social environment, and are more tense and unhappy. These variables are a major part of recent materialism research, and Kasser's conclusions are consistently proven.

### **3.1. The role of goods in consumer socialization**

The general goal of this dissertation is to understand the role of material goods in adolescence. The reason for choosing the target group is that adolescence is one of the defining stages of becoming a consumer. Adolescence is an important phase of personality development and socialization. Adolescence is a liminal transition between childhood and adulthood; usually starting at the age 11-13 and ending at the age 18-19, over the age 19-20 we can talk about the young adult age. According to the summary of V. Komlósi (2000), adolescence is characterized by intense physical and psychological transformations, which result in the development and strengthening of identity and self-image. As crises, insecurity, and family and community conflicts are

common at this stage of life, it can be considered a transition period from the point of view of consumer theory (Noble & Walker, 1997). In liminal transitions, the symbolic aspect of material goods stabilizes self-image and serves social comparison. In order to support the connection between adolescence and consumption theory, the explanations of the main theories of socialization development regarding puberty should be briefly reviewed, based on the summary of V. Komlósi (2000):

In **Freud's** theory of psychosexual development, adolescence is the so-called genital stage, when sexual intercourse with a partner becomes the focus of an individual's attention. According to Freud, personality development in adolescence essentially ends. Although Freud's theories have long been non-universal — largely because of libido as the explanatory variable — Freud's undisputed merit is that he was the first to draw attention to the importance of processes occurring in early childhood and later in sensitive stages.

In **Erikson's** theory of psychosocial development (1997), adolescence is a key stage in the development of identity, and its key moment is identity diffusion, when a teenager tries to identify with social roles through which he or she can find a place in the world. The consequences of the differences and contradictions between the requirements of desired roles and the adolescent's own self-image are crisis and uncertainty. As social roles are also a pattern of values and attitudes, this crisis is also a crisis of values and attitudes. Identification with roles is made possible by self-representations, thus adolescents create different self-representations for different roles. In each role, they have certain personal qualities that are advantageous, while they have others to hide. Different role contacts can easily confuse adolescents, and to avoid this, several internal compasses work, allowing them to control the appropriate behaviour. Adolescents sometimes look at the “social mirror” (aspect) intentionally, even through conflict, to assess their self-representation, confronting their self-image with what others think of them.

According to **Piaget's** theory of cognitive development (Inhelder & Piaget, 1967), from the onset of puberty to adolescence, adolescents develop in the formal operational stage. Adolescents become able to think logically, look for alternatives, make decisions and evaluate their choices, and abstract thought association is completed. Thoughts, plans and ideas for the distant future appear. Piaget had a major influence on the later theory of moral development developed by **Kohlberg** (1997). In

addition to cognitive abilities, the development of moral judgments, values, and behaviour in general appear in Kohlberg's theory. The young person becomes able to understand ethical principles, norms, and abstract relationships. Kohlberg calls adolescence an era of post-conventional morality, one stage of which is the social contract orientation and the other the ethical-theoretical orientation. Concepts such as equality, dignity, and justice come to the fore.

The essence of **Selman's** role-taking theory (1971) is that the individual learns to consider others in addition to his or her own point of view. In doing so, he understands the functioning of the society around him and the conditions for his existence. The success of understanding through role-taking depends on the integration of others' perspectives.

The socialization approach in consumption theory is justified by identification. The point is that the adolescent learns roles through life situations and behaviours. Those socialization agents who also convey values, norms and attitudes provide the roles. Socialization is not only development, but also role-modelling, and model-following through observations, contacts and imitations. By following the model, the young person can learn new elements of behaviour, explore new possibilities inherent in their existing abilities, and learn about the consequences of behaviours (Berta, 2008). In addition to the development of several other qualities, becoming an adult means full and smooth identification with roles, the ability to apply roles, and the internalization of values and norms. Socialization agents play a key role in mediating patterns, of which Rosengren (2004) distinguishes eight: family, peer groups, workplace communities; schools, churches, law enforcement authorities; mass movements, media. In order for all this to be interpretable in consumer theory, it is necessary to define consumer society.

In her comprehensive epistemological summary, Léna Simányi (2005) draws attention to the fact that a single valid definition of a consumer society cannot be given, because the emphases are particularly influenced by the scientific paradigm and the subject of the study. Simányi defines consumer society as "*a community whose members are primarily consumers, and through these consumer roles social relations, and relationships, identities are realized*". (Simányi, 2005. p. 173). The dissertation adopts this concept as a starting point and raises the question: is consumer behaviour the same role-play as any other social role?

According to **Roedder John** (1999), the answer is yes, however, the process of role learning and identification is the same as at the narrower and broader levels of the sociocultural environment. Ward (1974) first wrote on the theory of consumer socialization, according to which an individual must acquire the knowledge, attitudes and skills to succeed in the market for goods and services. As the impact of the media environment on children and young people, as well as the role of this target group in consumer decisions, received increasing attention from the 1970s, a significant amount and quality of literature was available by the end of the 1990s. In her synthesis, Roedder John (1999) points to the gradualization of becoming a consumer: the individual must move from the ability of specific cognitions to an understanding of the abstractions associated with cognitions. Roadder identified three stages of development based on the phases of John Piaget's theory of cognitive development:

- *perceptual stage* (3-7 years): characterized by egocentrism. Individual observations and perceptions serve as the basis for primary consumer decisions and product choices. The child is familiar - empirically - with the place of purchase and the brands available, but is unaware of the underlying content.
- *analytical stage* (7-11 years): from simple perception, the child's attention as a consumer is directed toward the symbol system of goods. The reason for this is the development of the ability to process information, to understand the complexity of the customer environment. Strategies appear in decisions, the need for perception and immediate satisfaction of desires is pushed into the background.
- *reflective stage* (11-16 years): the consumer is able to formulate and criticize the complex meanings behind branding and pricing. Attention is transferred to the perspectives of other people. What others think becomes important. The consumer shapes his or her own identity and strengthens his or her group membership through the perspectives of others.

Although John's structure (1999) of consumer socialization from adolescence applies only to early and middle-aged youth, the reflective system of attitudes can be said to be true of late adolescence (and even adulthood). Namely, the formation and shaping of (consumer) identity takes place in parallel and in contradiction with the expectations of the social environment, the driving force of which is social comparison. According to **Festinger** (1954), the theory of social comparison is based

on axioms in which the individual necessarily evaluates their own abilities and achievements, and the evaluation is based on the abilities and achievements of others. Adolescence is particularly characterized by an understanding of the social meanings behind consumer behaviour. Social comparisons, which are no longer based solely on adolescence, but also on the understanding of differences, appear and intensify in adolescence.

In fact, social comparison is a kind of reflection through which young people elaborate their impressions of personality, social status, consumption and property. Based on the research findings considered by Roedder John (1999), adolescents show a significant difference compared to children: among other things, they gather information from an increasing number of sources to make their consumer decisions. They are inadvertently strongly influenced by the opinions and behaviour of agents, especially their peers. They are critical of paid ads, and are able to detect deception. The cost-benefit principle emerges in their decision-making, but it can usually be said that they already have their own decision-making strategy and even influence the decisions of their family members. Although the independent income of adolescents, and thus their consumer autonomy is bounded, the anti-type of the adult consumer appears. Getting to know them better can give a primary impression of the consumer's motivations in the near future.

In addition, Roedder John (1999) draws attention to another aspect of consumer socialization: the acquisition and subsequent application of the motives for the selection and evaluation of goods. There are two fundamentally different motives for consumption: economic and social motivation. The latter includes phenomena such as conspicuous consumption, and self-expression through consumption, while the former includes the ability of goods to meet demand and its attributes (price, quality, substitutability, etc.). According to John, the desired outcome of consumer socialization is the primacy of economic motivations (awareness) over social motivations (emotions, desires). A better understanding of materialism in adolescence plays a significant role in this, which John herself predicts. Understanding the social meaning of goods and the symbol system of consumption, as well as the role of interpersonal relationships in consumption, can help to influence consumer socialization in a positive way. This supports research into the teenage contexts of materialism.

#### **4. EMPIRICALLY PROVEN RELATIONSHIPS OF MATERIALISM**

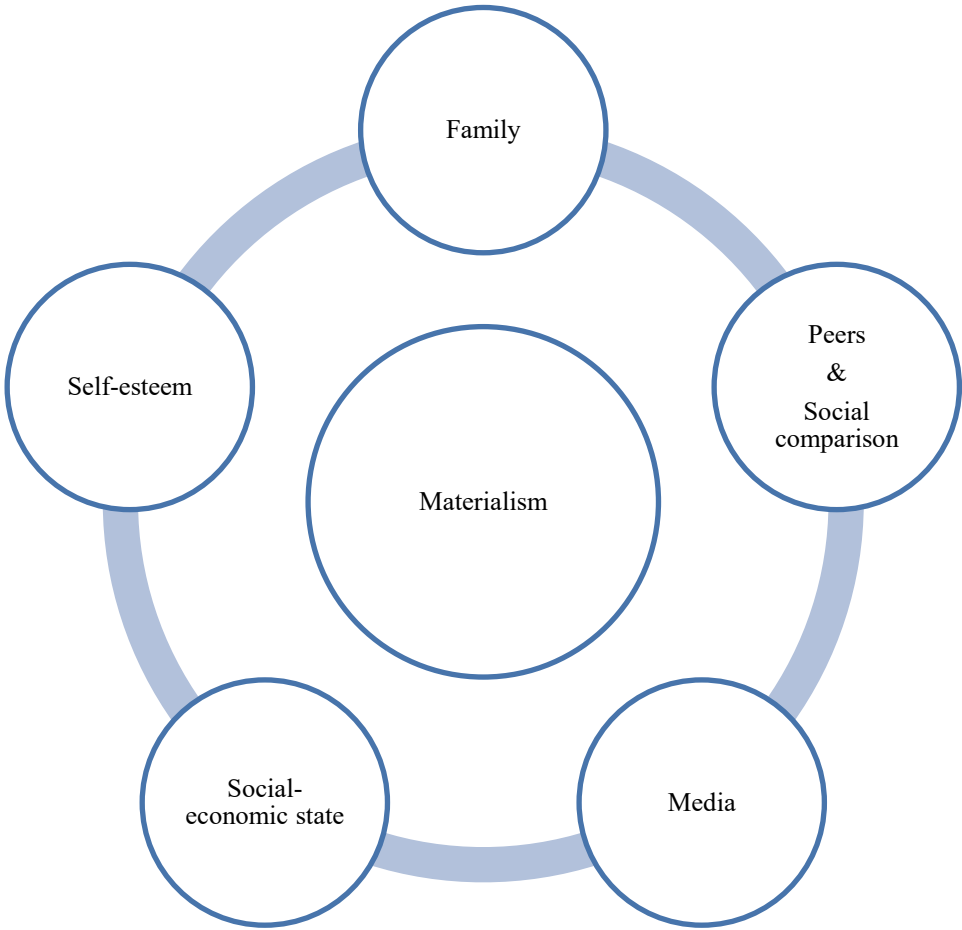
In the last few decades, materialism has been studied in the context of numerous personal characteristics, living conditions, habits, and consumption preferences. Before presenting the relationships, it is important to note that a certain degree of materialism is characteristic of everyone, as can be seen in the previous chapters: goods have always played a prominent role. It cannot be a research goal to prove how the development of materialism can be avoided. There is no doubt that people are attached to their acquired goods and usually want ever more and ever newer goods; however, exploring the strength and context of attachment is a crucial research area. As we will see, materialism can be the cause of several characteristics, preferences and states of existence that are unfavorable to the human personality. Understanding the relationships cannot eliminate materialism, but it can point to key moments that can attenuate a strong emotional attachment to goods, emphasizing the fulfilment of an immaterial, emotional, community spirit.

For various reasons, materialism research in the scientific literature is aimed primarily at adults. Firstly, because adults have their own income, sophisticated consumer behaviour, and well-tested decision-making principles that are not typical of a young target group such as teenagers or young adults. Additionally, psychological dispositions such as happiness, well-being, depression, loneliness, anxiety can be observed in adulthood. These dispositions and their relationship with materialism can be measured well. However, attitudes and inclinations at a young age are also influenced by other circumstances. For example, anxiety is a common feature in adolescence, and an adolescent is strongly attached to his or her personal material belongings. Despite a statistically significant relationship between anxiety and materialism, the interpretation of the relationship is probably not relevant, because anxiety can be caused by a number of other reasons (see Chapter 2.1.). On the other hand, in adulthood, if an individual has a strong attachment to possessions, and is even filled with real happiness by acquiring new possessions, the cause of the anxiety may be worth looking for in materialism. Conversely, the individuals' relationship with money, the relationship between the subjective socio-economic state and self-perception, or the mediating role of material values can even attenuate anxiety. In light

of this, why is it important to study young people? On the one hand, because materialism is formed at a young age due to numerous influencing factors on the development of personality (Chaplin et al. 2019). On the other hand, since we obtain an anti-type of a self-sufficient consumer of the near future, we can learn about the roots and latencies of their later preferences. In addition, the symbols and contexts that can be gained from adolescent research can help to formulate preventive, pro-social marketing messages.

Based on the results of the literature summarized in the tables 1-5 in this chapter, it can be said that in adolescence materialism is mostly related to the agents of socialization and the conditions determining the young years of life (Figure 1).

1. Figure: The relationships of materialism in adolescence



Source: own editing



The following sections present the empirically proven relationships of the network in Figure 1. The reviewed research findings include young adult and teenage related outcomes. The literature review helps to understand the importance of materialism in young life.

#### **4.1. The role of family relationships in materialism**

In the narrowest sense, the family is a community of parents and children. The materialist-consumerist and communicational pattern made up of their behaviour, habits and habitus is of outstanding importance compared to other agents of socialization. Table 1 summarizes the research findings demonstrating the relationship between materialism and the family. The complexity of the family-materialism relationship is well illustrated by the fact that the same studies were performed in several other studies in addition to those listed in the table, but no statistically significant results were obtained. However, it can be concluded from the significant results that the materialism of a young person is mainly influenced by the **material value system** of the family members, the **behaviour of the parents** and the **communication** within the family, as well as **disturbing or disrupting family events**.

Several studies (Adib & El-Bassiouny, Chaplin & John, 2010, Chia, 2010, Goldberg et al. 2003, Flouri, 1999) prove that children of material parents are more material themselves. A possible reason for this is that in childhood and adolescence, the parent-child relationship is usually based on unconditional acceptance of each other, which does not necessarily imply the absence of conflicts. The doubt on the part of the children about the way of life and the value system of the parents appears only later, when certain elements of values, attitudes and attitudes have already been internalized. The style of communication within the family plays a key role in internalization. Consumption, value, and materialism research take into account the typology of family communication according to McLeod and Chaffee (1972), which distinguishes between two styles: concept- and socio-oriented communication styles.

The concept-oriented communication style emphasises ideas, visions, challenges, and doubts about the other's position. Children are free to express their opinions, views, doubts or contradictions towards their parents. This type of communication is associated with the internalization of less material values, as the growing young person tends to pay attention to his or her own internal beliefs and put non-material thoughts at the forefront.

In contrast, the essence of socio-oriented communication is peace and harmony between family members, the expression of emotions rather than thoughts. All this necessarily means avoiding conflicts, suppressing beliefs that are contrary to those of family members, and ignoring problems. The consequence of the style is that material goods carry handrails and the possibility of compliance, which strengthens the materialism of young people. Roberts et al (2019) summarize systematically the relationship between family conflicts and disruptive family events with materialism. Conflicts and disruptive events (usually parental divorce) are a constant source of stress for the growing child, which increases their insecurity and contributes significantly to a deterioration in their self-esteem. In this unstable situation, the acquisition and possession of material goods is a stable point for the individual, which is well explained by the role of transition periods in consumer behaviour (see Chapter 2.1). A similar process occurs when parental behaviour (e.g., coercive parental behaviour) reinforces materialism. Unsupportive, empathic parental action causes a stressful situation similar to disturbing family events and conflicts, the consequences of which are well-known.

Nevertheless, several studies (summarized by Hoge et al. 1982) noted that the study of the transmission of values by the family often results in a weak stochastic relationship. Hoge and co-authors suggest that the development of values and attitudes during socialization cannot take place without the influence of a wider social environment. According to the literature on materialism, the next level in the expansion of the social environment is the level of peer group relationships.

1. Table: The relationships between family and materialism

Published	Authors	Sample	Age	Scale	Result <sup>1</sup>
2019	Roberts et al.	Midwest (USA)	11-19	Youth Materialism Scale (Goldberg et al. 2003)	Family conflicts (+)
2018	Behal & Soni	Punjab (India)	15-24	Materialism Value Scale for Children (MVS-c) (Oprea et al. 2011)	Concept-oriented communication (-) Socio-oriented communication (+)
2018	Ching & Wu	Hong Kong	mean 16	Youth Materialism Scale (Goldberg et al. 2003)	Destructive parental behaviour (+) Constructive conflict resolution (-)
2018	Gentina et al.	France	13-18	Youth Materialism Scale (Goldberg et al. 2003)	Materialism mediates the relationship between supportive parental behaviour and ethical consumption
2018	Islam et al.	Pakistan	15-24	Shortened Materialism Value Scale (Richins, 2004)	Social comparison with parents (+)
2016	Duh	Republic of South Africa	18-25	Materialism Value Scale (Richins-Dawson, 1992)	-. <sup>2</sup>
2014	Fu et al.	Jiangsu (China)	mean 16	Youth Materialism Scale (Goldberg et al. 2003)	Parental rejection (+)
2015	Grougiou & Moschis	Greece	18-28 <sup>3</sup>	Wong et al. 2003	Disturbing family events (+)
2013	Baker et al.	South-East USA France Brazil	19-29 <sup>4</sup>	Materialism Value Scale (Richins-Dawson, 1992)	
2013	Moschis et al.	Brazil	24 <sup>5</sup>	Wong et al. 2003	Socio-oriented communication (+)
2012	Adib & El-Bassiouny	Egypt	11-14	Interviews + Materialism Value Scale (Richins-Dawson, 1992)	Materialism of parents (+)

<sup>1</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Family conflict (+): The presence or frequency of conflicts increases an individual's materialism

<sup>2</sup> Disturbing family events, family stress, scarcity of family resources in childhood were not significantly positively related to materialism but to emotional attachment to money was.

<sup>3</sup> The survey concerned the adolescence of the respondents

<sup>4</sup> The survey concerned the adolescence of the respondents

<sup>5</sup> The survey concerned the adolescence of the respondents

Published	Authors	Sample	Age	Scale	Result <sup>6</sup>
2011	Weaver et al.	Southeastern Australia	20-27 <sup>7</sup>	Wong et al. 2003	Disturbing family events (+) Education of parents (-)
2010	Chaplin & John	Eastern states of USA	12-18	Photo collage + Youth Materialism Scale (Goldberg et al. 2003)	Emotional support of parents (-) Materialism of parents (+)
2010	Chia	Singapore	12-23	Youth Materialism Scale (Goldberg et al. 2003)	Materialism of parents (+)
2009	Chan & Xiao	Guangzhou (China)	11-17	Shortened Materialism Value Scale (Richins, 2004)	One-child family (+)
2003	Goldberg et al.	USA	9-14	Youth Materialism Scale (Goldberg et al. 2003)	Materialism of parents (+)
2005	Roberts et al.	Southwest USA	11-19	Materialism Value Scale (Richins-Dawson, 1992)	Divorce (+) Family stress (-)
1999	Flouri	United Kingdom	16-23	Materialism Value Scale (Richins-Dawson, 1992)	Materialism of mother (+)

Source: Own editing, based on the related articles

#### 4.2. Peer group relationships and social comparison

The results of research on the relationships between materialism, peer group relationships, and social comparison are summarized in Table 2. Peer group relationship covers friends and schoolmates of the same age as the growing youth. Peer group acts as socializing agents and forms the basis of social comparison (see Chapter 2.1). Moschis and Churchill (1978) first found empirical evidence for a relationship with materialism. Since their pioneering study, several others have considered the ability of peers to influence the development of consumer behaviour

The literature review reflects that the **materialism of peers**, the **frequent discussion of consumption** in the peer group, and **rejection or acceptance by peers** are dominant in the development of materialism. Two factors facilitate these phenomena: *social comparison* and *self-esteem*

<sup>6</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Family conflict (+): The presence or frequency of conflicts increases an individual's materialism

<sup>7</sup> The survey concerned the adolescence of the respondents

*Social comparison* is the evaluation of an individual's own situation through the results, successes, ownership, relationships, or health of others. Social comparison contributes significantly to self-esteem and is capable of evoking both positive and negative emotions. It manifests in consumer behaviour as socially accepted consumption. Churchill and Moschis (1978) also first described socially accepted consumption as consumer motivation that contributes to self-esteem and self-image perception in a social setting. It allows the growing young person to implement consumer behaviour which meets the expectations perceived in their social environment. As the self-image of a teenager is immature, uncertain and undulating, it is of great importance that he can place himself in the network of those around him with the help of his consumer habits and goods. Erikson (see Chapter 2.1) also points out that self-esteem and self-image are closely related to self-esteem: the more stable the self-image, the stronger the self-esteem and vice versa. Campbell (2018) demonstrated among adolescents that a more unstable self-image makes an individual vulnerable to social environments. In this context, the mediating role of self-esteem can be observed, which is the next influencing factor of the materialism that develops in youth, but with the 3.3. Chapter deals in detail.

Although Chan (2019) did not specifically examine the relationship between peer group and materialism, it is worth mentioning her study. In the context of social comparison, she was looking for the answer: what do teenagers think about wealthy, affluent people? According to her findings, teenagers usually describe them as selfish and wasteful personalities, thought they do not have many true friends, and are unhappy. In contrast, those who are poor or less wealthy have many friends and find more happiness in non-material values. There was frequent feedback that the desire to have as many goods as possible also hinders school progress.

2. Table: The relationship between peer group, social comparison and materialism

Published	Authors	Sample	Age	Scale	Result <sup>8</sup>
2020	Zhang et al.	Zhuhai (China) & Rotterdam (Netherlands)	mean 20	Shortened Materialism Value Scale (Richins, 2004)	The need to belong somewhere mediates the relationship between conditional self-esteem and materialism
2018	Islam et al.	Paksitan	15-24	Shortened Materialism Value Scale (Richins, 2004)	Social comparison with friends (+)
2018	de Oliveira Santini et al.	meta-analysis	10-19	meta-analysis	Perceived norms of friends (+) The student-student relationship moderates the relationship between self-esteem, telephone addiction and materialism
2018	Wang et al.	Hebei (China)	15-19	Materialism Value Scale (Richins-Dawson,1992)	Susceptibility to the opinions of peers (+)
2017	Dávila et al.	Catalonia (Spain)	8-12	Youth Materialism Scale (Goldberg et al. 2003)	Peer influence (+)
2017	Islam et al.	Paksitan	18-23	Materialism Value Scale (Richins-Dawson,1992)	Peer rejection (+)
2015	Jiang et al.	China	12-16	Modified Materialism Value Scale (Oprea et al. 2011)	Social comparison (+) Peer communication about consumption (+)
2013	Chan	Macau	8-17	Youth Materialism Scale (Goldberg et al. 2003)	Peer communication about consumption (+)
2013	Moschis et al.	Brazil	24 <sup>9</sup>	Wong et al. 2003	Socially accepted consumption (+)
2012	Gil et al.	Singapore	12-19	Wong et al. 2003	Importance of social comparison
2012	Isaksen & Roper	England	15-16	Focus group	Peer acceptance (-)
2010	Chaplin & John	Eastern states of USA	12-18	Photo collage + Youth Materialism Scale (Goldberg et al. 2003)	

<sup>8</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Peer rejection (+): If the individual is rejected by his or her peers, materialism increases.

<sup>9</sup> The survey concerned the adolescence of the respondents

Published	Authors	Sample	Age	Scale	Result <sup>10</sup>
2010	Chia	Singapore	12-23	Youth Materialism Scale (Goldberg et al. 2003)	Peer materialism (+)
2008	Banerjee & Dittmar	United Kingdom	8-11	Youth Materialism Scale (Goldberg et al. 2003)	Peer materialism (+)
2008	La Ferle & Chan	Singapore	13-18	Shortened Materialism Value Scale (Richins, 2004)	Peer materialism (+)
2007	Chan & Prendergast	Hong Kong	14-18	Shortened Materialism Value Scale (Richins, 2004)	Social comparison (+)
2005	Pikó	Hungary	14-21	Materialism Value Scale (Richins-Dawson, 1992)	Consumption and peer-oriented lifestyle (+)
1999	Flouri	United Kingdom	16-23	Materialism Value Scale (Richins-Dawson, 1992)	Peer communication about consumption (+)
1978	Moschis & Churchill	USA	12-18	Moschis & Churchill, 1978	Peer communication about consumption (+)

Source: Own editing, based on the related articles

### 4.3. The role of self-esteem

In Rosenberg's definition (1965), self-esteem is a positive or negative aspect or reflection of an individual's own self. We can discuss about positive, strong or high self-esteem when the individual is satisfied with his or her current abilities and achievements; otherwise, a negative, weak or low self-esteem is applicable. Self-esteem is a psychological construct that, in addition to its individual and socio-psychological significance, plays a major role in economic decisions such as consumer behaviour. The development of self-esteem is closely related to age and individual life

<sup>10</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Peer rejection (+): If the individual is rejected by his or her peers, materialism increases.

stage and state. Erikson (1963) had already noted that at the beginning of puberty (between the ages of 12 and 13), self-esteem usually falls sharply, mainly due to a sudden physical and psychological transformation and process of becoming critical and self-conscious. There is often a contradiction between the ideal and the true self-image. This discrepancy can further worsen self-esteem, as can the change of school from primary to secondary at the age of 14-15 and the need to comply and perform in the new high school environment. By middle and late adolescence, self-esteem usually starts to rise, which is due to the young person becoming used to their transformed self-image, discovering their own limits and abilities, and attempting to thrive in their social environment. Consumer research soon recognized the possibility that self-esteem may play a direct or indirect role in certain decisions, in the formation of attitudes, and in the internalization of values. Self-esteem can also contribute to the strengthening of values such as materialism, the recently proven correlations of which are summarized in Table 3. It is worth noting that self-esteem often plays a mediating role between materialism and factors such as family or peer relationships. Undoubtedly, self-esteem is related to the fact that the growing young person perceives certain expectations in his or her social environment, be they explicit expectations or the habits and behaviours of others that they are trying to adjust to. The significance of all this in the process of consumer socialization is that the social environment inevitably influences the preferences and expectations of the consumer of the future with their independent income and decision-making ability.



3. Table: The relationship between self-esteem and materialism

Published	Authors	Sample	Age	Scale	Result <sup>11</sup>
2018	Li et al.	Southwest USA	mean 20	Shortened Materialism Value Scale (Richins, 2004)	Self-esteem mediates the relationship between perceived social state and materialism
2018	Wang et al.	Hebei (China)	15-19	Materialism Value Scale (Richins-Dawson, 1992)	The student-to-student relationship moderates the relationship between self-esteem, materialism and telephone addiction
2015	Fu et al.	Jiangsu (China)	mean 16	Youth Materialism Scale (Goldberg et al. 2003)	Self-esteem mediates between materialism and parental rejection
2015	Jiang et al.	China	12-16	Modified Materialism Value Scale (Oprea et al. 2011)	Self-esteem (-)
2014	Chaplin & Roadder John	USA	8-17	Photo-collage	Self-esteem mediates between age and materialism
2013	Chan	Macau	8-17	Youth Materialism Scale (Goldberg et al. 2003)	Self-esteem (-)
2012	Isaksen & Roper	England	15-16	Focus group	Consumption plays a significant role in strengthening self-esteem
2010	Chaplin & Roadder John	Midwest USA	12-18	Youth Materialism Scale (Goldberg et al. 2003)	The mediating role of self-esteem between materialism and supportive behaviour of parents or peers

Source: Own editing, based on the related articles

As self-esteem is also affected by experiences in the social environment, and social comparison directly influences materialism (see Table 2), it is relevant to address today's transformed forms of social contact. While until the early 2000's the narrower - wider socio-cultural environment and the traditional media offered different patterns, from the 2010s to the present day, thanks to social media, we can gain insight into the life, achievements, performance and everyday life of almost anyone. Consumer researchers, as evidenced by the research findings in the next section have also noted the potential effects of offline and online media on materialism.

<sup>11</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Self-esteem (-): the greater the self-esteem, the lower the materialism.

#### **4.4. How does social media effect materialism?**

The media have played a key role in people's lives for decades. In addition to their function of providing information, they have an effective ability to create and shape culture. With the rise of the internet, it has become necessary to distinguish between offline and online media. The former includes traditional radio, television, print media, and the latter includes content available via the Internet, including news sites, social networking sites, blogs, vlogs, and content sharing, but the online appearance of offline media (e.g., online television) is also common. Despite some overlaps, creating content and delivering it to the target audience requires completely different practices in offline and online media. Content consumption is also different, for example, offline media use can be active (with attention, partial exclusion of the outside world) or passive (as a background program), while online media use is characterized by the simultaneous consumption, management, and multi-tasking of multiple content. The fundamental difference is that offline media generally does not allow the consumer to provide feedback or create content and the consumer's options are bounded (number of radio stations or television channels are given) while the web is almost unlimited. The user has the opportunity to create content, provide feedback, interpersonal communication, and immersion in the infinity of the Internet, depending on their own personal abilities and current technical conditions and legislation.

The ability to influence offline and online media extends to almost every area of life. One has to face or nurture one's own preferences, expectations, principles, and values in the media every day, moment by moment, as a result of which development, change, adjustment or even denial are inevitable. Consumer habits and preferences are no exception, offline content is usually targeted and deliberately manipulated (e.g., product quality), while online content, with targeted ads and marketing messages, often tries to infiltrate unnoticed. In light of this, one of the most recent marketing terms is "influencer," meaning a person who can influence others. Although many are professional influencers, it is important to keep in mind that thanks to user-generated content and the transmission of content through social networking sites, anyone can become an influencer. It is true that the influencer in common parlance professionally produces and distributes content that reaches a significant number of audiences, but the phenomenon of influencing and being influenced is much more diverse. Based on the correlations described in Chapter 3.2. and 3.3, it can be said that due to the

influencing power of peer relationships, the compulsion of social comparison and self-esteem, any Internet user is able to have an effect on any consumer decision in another user.

4. Table: The relationship between self-esteem and materialism

Published	Authors	Sample	Age	Scale	Result <sup>12</sup>
2019	Lou & Kim	USA	10-19	Clark. et al. 2001	Parasocial relationship with influencers (+) Influencer opinion (+) Parental mediation (-)
2018	Behal & Soni	Punjab (India)	15-19	Materialism Value Scale for Children (MVS-c) (Opree et al. 2011)	Frequent television watching (+) Restrictions on internet use by parents (+) Susceptibility to advertising (+) Celebrities (+)
2018	de Oliveira Santini et al.	meta-analysis	10-19	meta-analysis	Media exposure (+) Symbolic use of media (+)
2018	Zawadska et al.	Poland	13-16	Aspiration Index (Kasser et al. 2014)	Social media mediates between materialism and social comparison with peers and celebrities
2017	Islam et al.	Pakistan	15-19	Materialism Value Scale (Richins-Dawson,1992)	TV ad watching (+) Admiration for celebrities (+)
2017	Dávila et al.	Catalonia (Spain)	8-12	Youth Materialism Scale (Goldberg et al. 2003)	Facebook (+)
2017	Ozimek et al.	Bochum (Germany)	17-28	Materialism Value Scale (Richins-Dawson,1992)	TV ads (+) Influence of celebrities (+)
2017	Islam et al.	Pakistan	18-23	Materialism Value Scale (Richins-Dawson,1992)	TV ads (+) Advertised products (+)
2014	Opree et al.	Netherlands	8-11	Rövidített Materialism Value Scale (Richins, 2004)	

<sup>12</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Media exposure (+): the bigger the media exposure, the greater the materialism.

Published	Authors	Sample	Age	Scale	Result <sup>13</sup>
2013	Moschis et al.	Brazil	24 <sup>14</sup>	Wong et al. 2003	Television watching (+)
2012	Oprea et al.	Netherlands	8-11	Shortened Materialism Value Scale (Richins, 2004)	TV ads (+)
2010	Chia	Singapore	12-23	Youth Materialism Scale (Goldberg et al. 2003)	TV ads (+)
2009	Chan & Xiao	Guangzhou (China)	11-17	Shortened Materialism Value Scale (Richins, 2004)	TV ads (+)
2008	La Ferle & Chan	Singapore	13-18	Shortened Materialism Value Scale (Richins, 2004)	Peer materialism (+) Influence of celebrities (+)
1978	Moschis & Churchill	USA	12-18	Moschis & Churchill, 1978	Frequent TV watching (+) Socially accepted consumption (+)

Source: Own editing, based on the related articles

Although the interactions of materialism in Table 4 are most closely related to television and television advertising, research on media personalities, celebrities, social media, and influencers has recently appeared. The fact that the results in the literature on the relationship between social media materialism are predominantly related to the adult target group (see Kim et al. 2021, Colella et al., 2020, Sheldon & Bryant, 2016, Hum et al. 2011 in Chapter 7) increases the relevance of teenage studies such as the present dissertation. Horton and Wohl (1956)

An important correlation for the family as a socializing agent is that parental rigor (prohibition, surveillance, and restriction) is demonstrably counterproductive and enhances the young person's materialism. Nevertheless, it is worth noting the inclusion of parasocial internet connections in the subject matter of materialism. According to Horton and Wohl (1956), a parasocial relationship is a one-sided relationship between a user and a content creator (usually a celebrity) in which the user thinks the content creator knows him in the same way. The materialism-enhancing effect of this relationship has been demonstrated and confirms the relevance of influencers in materialism research. The relationship is certainly motivated by social comparison,

<sup>13</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Television watching (+): the more frequent the television watching, the greater the materialism.

<sup>14</sup> The survey concerned the adolescence of the respondents

socially accepted consumption, and compliance with the offline and online social environment. The importance of the social environment has been demonstrated many times over by the summaries of the previous chapters. Consequently, it is necessary to include the socio-economic situation of the individual in the subject matter of materialism.

#### **4.5. The role of socio-economic state and satisfaction with life**

In terms of living conditions, individual's **social and economic states**, and even more so their subjective social and economic states (SES) are important variables in consumer research. SES refers to the way in which respondents assess their own status, especially important in the field of materialism, as we have seen that social comparison and socially accepted consumption are of great importance in the development of material values. The individual's own subjective, self-perceived socio-economic situation forms the same basis for social comparison as a material item or other consumption opportunity. It is clear from the results of Table 5 that the financial situation of the family is negatively related to materialism; thus, the worse or better the financial conditions under which a young person grows, the stronger or weaker he or she is attached to material goods.

**Satisfaction with life** necessarily appears in the relationship between materialism, socio-economic status, and social comparison. Satisfaction with life is a complex psychological construct fundamentally related to the perceived quality of life. The results in Table 5 confirm that its relationship with materialism is negative, meaning that the more material an individual is, the less satisfied he is with his life and vice versa. According to Diener et al. (1999), the theory of subjective well-being explains the negative relationship in two approaches. According to the top-down approach, life satisfaction is influenced by internal personal factors such as self-esteem, alienation, optimism, pessimism, and an extrovert or introvert personality. The materialist personality traits named by Belk are related to this concept: possessiveness, non-generosity and envy are able to evoke negative emotions, the more material someone is, the more characteristic negative psychological dispositions that cause dissatisfaction with life may be (top-down). In contrast, according to the bottom-up approach, situational factors such as living standards, work, family, leisure, or

cohabitation which contribute to life satisfaction through subjective well-being are more important. The material aspects of these factors (income, savings, possessions, etc.) are stacked (bottom-up) and contribute to quality of life. Thus, an individual's dissatisfaction with their own situational factors necessarily worsens the perception of their own life, that is, it leads to dissatisfaction with life. The relevance of the investigation of links between social comparison and materialism is confirmed by the life satisfaction approach. In a top-down context, there is no doubt that self-esteem has a direct effect or a mediating role; while in a bottom-up context, the link is comparing one's individual life situation with that of others.

5. Table: The relationship between socio-economic state, satisfaction with life and materialism

Published	Authors	Sample	Age	Scale	Result <sup>15</sup>
2020	Górnik-Durosse & Pyszkowska	Upper Silesia (Poland)	19-29	Shortened Materialism Value Scale (Richins, 2004)	Perceived standard of living (-)
2020	Ozgen & Esiyok	Turkey	14-19	Shortened Materialism Value Scale (Richins, 2004)	Socio-economic state (+)
2018	Li et al.	Southwestern USA	mean 20	Shortened Materialism Value Scale (Richins, 2004)	Perceived social state (-)
2018	Zawadska et al.	Poland	13-16	Aspiration Index (Kasser et al. 2014)	Financial state of the family (+)
2016	Duh	Republic of South Africa	18-25	Materialism Value Scale (Richins-Dawson, 1992)	_ <sup>16</sup>
2015	Sidhu & Foo	Singapore	mean 21	New Materialism Scale (Trinh-Phau, 2012)	Satisfaction with life (-)

<sup>15</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Perceived social state (-): the worse the individual's perception of his or her social state, the greater the materialism.

<sup>16</sup> Scarcity of family resources in childhood were not significantly positively related to materialism but to emotional attachment to money was.

Published	Authors	Sample	Age	Scale	Result <sup>17</sup>
2015	Fu et al.	Jiangsu (China)	mean 16	Youth Materialism Scale (Goldberg et al. 2003)	Household monthly income (+)
2015	Ku	Hong Kong	11-18	Extrinsic & intrinsic goals (Kasser-Ryan, 1996)	Family economic state (-) Satisfaction with life (-)
2014	Chaplin & Roadder John	USA	8-17	Photo-collage	Childhood poverty (+)
2014	Chen et al.	Beijing (China)	17-26	Materialism Value Scale (Richins-Dawson, 1992)	Satisfaction with life (-)
2014	Tsang et al.	Southwestern USA	18-25	Shortened Materialism Value Scale (Richins, 2004)	Satisfaction with life (-)
2012	Isaksen & Roper	England	15-16	Focus group	Family economic state (-)
2011	Froh et al.	Long Island NY (USA)	14-19	Shortened Materialism Value Scale (Richins, 2004)	Satisfaction with life (-)
2003	Goldberg et al.	USA	9-14	Youth Materialism Scale (Goldberg et al. 2003)	Family economic state (-)

Source: Own editing, based on the related articles

#### 4.6. Conclusions on adolescent materialism

As material and tangible goods play a key role in satisfying both physiological and psychological needs, material values and attachment to goods cannot be eliminated. Orientation in life, assessment of the situation, or setting new life goals necessarily goes hand in hand with attachment to possessions and desires. Looking at the factors that influence materialism and are significantly related to it, it can be concluded that among the most important antecedent variables, there is hardly anything that a teenager would be able to influence. Irrevocable family relationships; self-esteem as a psychological construct, social comparison as a deep-rooted compulsion; socio-economic status of young people; or peer relationships that are largely due to physical proximity (residential and school environments) are all determined, difficult or impossible to change, and, as seen in Chapter 3, predestine the individual to certain consumer behaviours. Bourdieu's (1984) theory of habitus sheds light on the role of

<sup>17</sup> The plus and minus signs characterize the direction of the relationship between materialism and the named variable. For example: Satisfaction with life (-): the less satisfied the individual with his or her life, the greater the materialism.

the living environment and the social environment in the individual's tastes, desires, forms of behaviour and habits as consumers. This is partly confirmed by the research results of youth materialism, as they are a good indication as to the extent to which environmental factors determine the nature and strength of attachment to goods.

If we look again at the results in the tables, a certain mediating function of materialism is outlined between the self-perception of the individual and the external, objective phenomena of reality. It is not clear - and it would hardly make sense to focus on researching what exactly triggers materialism, because the examined variable is a factor in one context, a mediator in another, and a cause in another. For instance, while self-esteem in one type of research design is an independent variable of one context, in another it is a dependent variable of the same context. Accepting the dialectical, explanatory, insoluble relationship between the person and the object already emphasized in the introduction, we can conclude that materialism characterizes this relationship as a vector. Materialism is a variable which is specifically suited to the creation of scientific knowledge and the inclusion of a wider range of criteria. Considering that the correlation system of studies among young people is limited to only a few groups of variables (family, peers, self-esteem, media and socio-economic status), it can be concluded that the study of materialism is far from being fully exploited.

In terms of age characteristics, although most of the samples in the tables are teen samples, the proportion of studies in childhood and young adulthood is very high. Teen research is an under-researched field despite the fact that, as will be seen in the following chapters, many relationships are unknown or only marginally investigated. Less researched areas are, for example, the context of social media, despite the fact that today it has evolved from simple applications into an irrevocable living space, authoritative and at the same time reconstructing social relations. Similarly, the study of the general value system of teenagers is incomplete. While materialistic values and materialism, often seem to be snatched away from an individual's life strategy, studies have consistently forgotten to place materialism in the coordinate system of terminal and instrumental values. Based on the research results, it can be said that unfavorable family conditions increase materialism, which is not beneficial, as emotions such as selfishness and envy come to the fore, and clearly materialism can jeopardize social relationships.



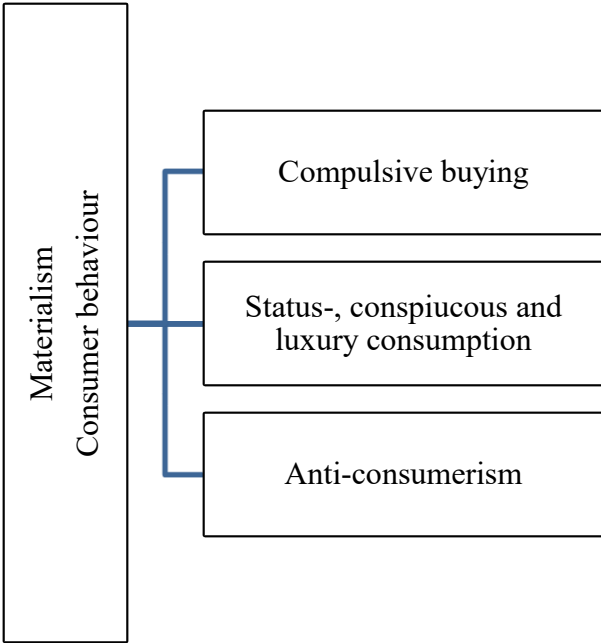
However, it is impossible to leave unmentioned that materialism maintains a close positive relationship with the pursuit of security or, paradoxically, good social relations? It is unlikely that an individual's desire for wealth may increase precisely because he or she wants to avoid family conflicts in his or her own youth in the future. As unfavorable social comparisons due to self-esteem or the scarce financial situation are common sources of anxiety, dissatisfaction with life, or interpersonal conflicts and materialism can also seem to be a kind of defensive life strategy. In a deeper psychological context, it can also be interpreted as a means of individual coping, social mobility, self-realization, and fulfilment. It would not be surprising if these thoughts were reflected, for example, in school choice - also an under-researched area - confirming the assumption that applicants to a high school or a better school think long-term; while those who choose vocational training want to acquire an ability that pays them well in the short term. Undoubtedly, we also face individual life strategies.

As for the future, the current idea is to include the ability to restrict and simplify the study. Perhaps one of the defining questions of the decades ahead is whether we are capable of a more conscious arrangement in terms of the natural and social environment. Therefore, if materialism is to play any role in simplification, its boosting at a young age is essential for successful social action. The strengthening of inner, spiritual, higher values and the fulfilment of community spirit can necessarily accompany the weakening of materialism. The answer to why it is relevant to map the importance and psychological function of goods at an early age is to be found in adult contexts. The summary in Chapter 4 states that materialism poses a real threat to consumer preferences and the delays behind them, in the long run; how the individual feels, how satisfied or dissatisfied with what he or she has achieved. Although the logical and formal frames of the present dissertation do not allow for a full elaboration of materialism, it is important to mention that in a broader context, the scientific literature reports significant relationships such as depression, commitment levels, addictions, or social relationships. That is, materialism affects almost every area of life. The economic and consumer behavioural contexts of materialism are convincing among adults only considering the last few years.

**5. THE EFFECTS OF MATERIALISM IN ADULTHOOD: SELECTION OF EMPIRICAL RESEARCH RESULTS FROM THE PAST YEARS**

Although the target group of the dissertation is teenagers, it is worth getting to know the outcome of the materialist lifestyle and values in adulthood. Materialism research involving adults has a different focus than adolescent research, yet it sheds light on the long-term consequences of materialism and urges an examination of the variables through which dependence on material goods can be attenuated. Summarizing materialism research among **adults**, it can be concluded that the most frequently studied variables are: **consumption, happiness, well-being** and **satisfaction**. In other words, economic (consumer habits, consumer behaviour) and psychological (happiness, well-being, satisfaction) constructions are the focus of researchers' interest.

2. Figure: The most frequent consequences of materialism in adulthood



Soures: own edited

In the last few years, the relationship of materialism to compulsive buying, status consumption, and anti-consumerism has received more attention in terms of consumer behaviour (Figure 2). **Compulsive buying** is a multi-complex consumer behaviour in which an individual is unable to resist buying more and more tangible goods. Acquisition is usually aimless, the act of purchase does not satisfy a real need or physiological need, it has only psychological significance, and at the same time, the psychological background of the forced purchase is the most important aspect. Christenson et al. (1994) classify this as a psychopathological disorder since aimless shopping leads to financial, interpersonal, and psychological stressors. According to Harnish and Bridges (2015), it is a vicious circle, because a negative feeling, malaise, or unfavorable psychological condition triggers the urge to acquire, which also has negative consequences: regret, stress, and conflict situations. Several studies support that materialism is not only significantly positively related to compulsive shopping (Harnis et al. 2019; Pradhan et al. 2018; Islam et al. 2017), but there is also a causal relationship and materialism can lead to compulsive shopping (Harnish et al. 2019; Villardefrancos & Otero-Lopez, 2016).

Previously, Eastman et al. (1999) defined **status consumption** as a motivational process by which an individual can demonstrate his or her own social status on the one hand and strengthen his or her subjective social status on the other. Although they are often identified in consumer research as conspicuous consumption or luxury consumption, and even depending on the paradigm - all concepts are treated as synonyms - there is a difference between them. The goal of **conspicuous consumption**, as Trigg (2001) defines it, is to represent well-being through expensive or luxury products and services. Luxury consumption is a much more complex phenomenon, as it simultaneously expresses the consumer's belonging to a higher social stratum with visible, symbolic attributes (e.g., brand, logo) and has an impact on everyday social interactions: the message of which is that the consumer's status is privileged. According to Kastanakis and Balabanis (2012), personal factors such as interdependent self-construal, being influenced by normative expectations or striving for uniqueness and differentiation contribute to the growth of luxury consumption, as a conclusion: social acceptance and compliance with social expectations. Whichever approach prevails, the essence of status consumption is to impress the social environment and to send symbolic messages to the outside world through possessions.

Research in this field has a long history; but the significant positive relationship of status, conspicuous, and luxury consumption with materialism (Siahitri & Lee, 2019; Audrin et al., 2017; Chan et al. 2015) and its development as a consequence of materialism (Flynn et al., 2016) have only been proved in recent years. Behind stochastic relationships, it is important to recognize how vulnerable an individual is to the expectations of the social environment, if they accept and perform status consumption. This confirms the validity of examining consumer behaviour, including materialism, in a social context.

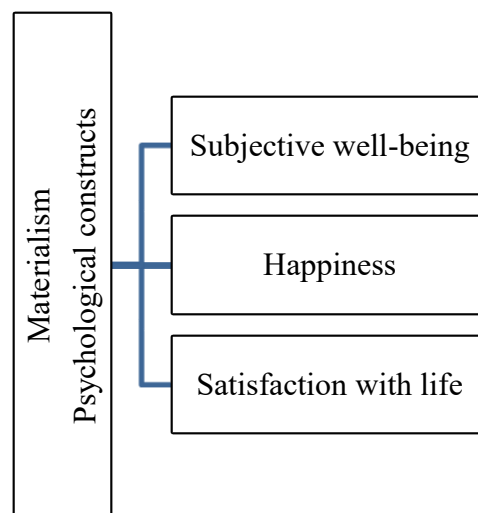
**Anti-consumerism** is a collective term that encompasses all individual habits and life strategies aimed at reducing self-consumption, sharing-based services, eco-social awareness, socially friendly behaviour, or sustainability. Davidson et al. (2018) found evidence for an interesting relationship: materialism has a positive effect on participation in a *sharing-based economy*, so the more materialistic the participants in their sample, the greater their willingness to use services through sharing. According to the results of Hultman et al. (2015), individuals who are more material are less willing to pay a *premium price for a sustainable service* in this context. They have also shown that materialism has a significant negative correlation with the perception of *ecotourism* and the intention to participate in ecotourism. Similarly, Hynes and Wilson (2016) concluded that although individuals who are more material generally value food more highly, as they view it as an acquired property; they have a negative attitude towards *environmentally friendly food* as a social norm. Nguyen et al (2019) also revealed a negative correlation between materialism and *anti-consumerism*, which was explained by four aspects of consumption: the need for control over consumption, concerns, material desires and a source of happiness. They have also shown that the material happiness component of materialism (see Richins-Dawson scale) has a significantly negative relationship with a green purchase intention. Nevertheless, the results of Yang et al. (2018) show that materialism has a significantly negative relationship with *prosocial behaviour* towards family members, friends, and strangers.

The mediating and influential role of the social environment and the compulsion to meet social expectations are also well illustrated in the anti-consumerist context. Specifically, Wang et al. (2019) noted this in a private context; individuals who are more material are more selfish and less interested in environmental awareness, while the same individuals are more environmentally conscious in a public context. The

results draw attention to the influencing role of the consumer decision situation (private or public).

In addition to the consumption issues of adult materialism research, psychological aspects are the most significant. As discussed in Chapter 1, Kasser's publications and book (2002) on the consequences of materialism pointed to its psychological implications, which soon gained great popularity in the scientific literature. This not only provided new dynamics and ideas to researchers, but also drew attention to the important question of how an individual can thrive in a consumer society while maintaining his or her mental health. Maintaining mental health and being successful in a consumer society is a dilemma which affects numerous people, despite receiving little attention in the media - and even less so in the tabloids – every individual has to cope with the feelings that go with this dilemma on a day-to-day basis: self-image, self-realization, self-esteem, well-being and satisfaction with life in general. At the same time, we can talk about an economic issue, since the same connections can be recognized in the development of individual needs and market supply, as well as in relation to money. The following summary shows that the research results of recent years have focused primarily on **subjective well-being, happiness, and life satisfaction** (Figure 3).

3. Figure: The relationship between materialism and several psychological constructs



Source: own editing

**Subjective well-being** as a complex psychological construct and its role in life satisfaction is described in Chapter 3.5. in detail. Wang et al. (2017) noted that psychological need satisfaction (PNS) plays a mediating role between materialism and psychological dispositions. At the same time, their results confirmed the negative relationship between materialism and subjective well-being. The same result was obtained by Jiang et al. (2016) and Li and Atkinson (2020), who explained that materialist individuals place too much emphasis on possession. Consequently, a shift toward ownership of intellectual values can reduce attachment to goods and increase subjective well-being. In other words, it may also be the cause of the unhappiness of more materialistic individuals. Kumar and Gilovich (2015) and Guevarra and Howell (2015) have previously confirmed that experiential consumption contributes more to **happiness** than the consumption of material goods, a fact that has long been known and repeatedly proven in previous publications. In addition, Guevarra and Howell (2015) included PNS in the study with results, which supports the psychological differences between experiences and material possessions. Kaur Sidhu and Hean Foo (2015) identified happiness as a moderator variable between materialism and life satisfaction, finding that those who are more loosely attached to their material possessions are more satisfied with their lives. At the same time, it was pointed out that social comparison and the assertion of individuality in the social environment play a significant role in the development of materialism. Similar to subjective well-being, **life satisfaction** is also shown in Chapter 3.5. In recent years, Ku (2015), Kaur Sidhu and Hean Foo (2015), Villardefrancos and Otero-Lopez (2016), and Wang et al. (2017) have found evidence of a significant negative relationship with materialism.

## **6. SELECTION OF MATERIALISM AND VALUE RELATED STUDIES FROM HUNGARY**

Among the empirical researchers in Hungary, Szondy's (2006) research on the relationship between financial situation and happiness fits into the relationship system detailed so far. According to Szondy's results, one of the conditions for happiness is material well-being, but an important conclusion is that although unhappiness is closely related to poverty, beyond the ability to meet basic needs, the relationship between happiness and well-being is weakened, unhappiness is closely related to poverty. Pikó (2006) demonstrated a positive relationship between life satisfaction and financial success and material happiness in a large sample of high school students. Pikó (2005) also examined the correlations between young people's leisure activities and values. He found that consumption- and peer-oriented styles are closely related to materialism, while traditional-conservative styles are negatively related to materialism, while intellectualism and the experience-seeking style are not characterized by materialism.

Although materialism was not part of Sági's (2006) study, it presents a panorama showing the key role of comparison with reference groups. The development of life satisfaction after the change of regime in 1989-1990 was carried out with the data of the TÁRKI Household Monitor. The reference groups for the Hungarian population have transformed since the early 2000s, and gone well beyond the medium- or macro-level social environment. Already at that time, Sági found that those who were in the best financial situation tended to choose a reference group such as the citizens of Western European countries, which necessarily caused dissatisfaction. It is noteworthy that the group of young people without an independent income - who were in the lowest income decile in the sample - were particularly inclined to compare their own situation with that in Western Europe. Although no similar study comparing social deciles has been conducted on the subject since then, it is likely that the role of social comparison has not diminished due to media consumption patterns, especially the rise of the internet and social media. Although Martos and Kopp (2012) did not examine subjective well-being in the context of materialism in a representative Hungarian sample, their present thesis found a relevant correlation: extrinsic goals worsen, while

intrinsic goals improve subjective well-being. Regarding the effect of experience consumption on subjective well-being, Hajdu and Hajdu (2017) concluded in a nationally representative sample that the optimal proportion of consumption of material goods and experiences may contribute most to subjective well-being and thus to life satisfaction.

Hofmeister and Neulinger's (2013) study specifically examining materialism is of great importance in Hungarian materialism research. Based on the results of two representative samples taken in 2002 and 2007, the Hungarian population had been characterized by a desire for high possessiveness and non-generosity. A change in consumer culture was however observed. Novel consumer habits, such as consumption from credit or leasing, have gained ground, and individualization has intensified. In relation to age, the older third of the population was the most material, presumably due to personality development that took place before the change of regime. In the socialist era, in spite of the collectivist political environment which opposed private property and promoted financial simplicity, certain status symbols (such as vehicles, housing) and spending opportunities (such as travel, holidays) had a significant impact. The desire for them or the uncertainty of obtaining them (for instance shortage and scarcity) can increase the desire to own, acquire and possess. The members of the generation already growing up in a market economy were conspicuously less materialistic.

### **6.1. The role of values in consumption studies**

The large number of literature findings summarized in Chapter 3 prove that materialism is a phenomenon widely studied worldwide to this day. The network of variables affecting materialism and those influenced by materialism is well illustrated from the results. It is also clear that research on young people, and especially on adolescents, tends to reinforce correlations between similar variables (family, peer relationships, self-esteem) repeatedly. However, the results of materialism research among adults, the consumer behavioural and psychological implications presented in Chapter 4, confirm that research on the development of materialism in youth is still necessary and important. In a broader context, a better understanding of the relationship between people and goods is a precondition for promoting and supporting more conscious, responsible consumer behaviour.



The present dissertation undertakes to venture deeper than before (Chapter 3) into understanding the motivations of teenagers as well as young consumers. Therefore, internal factors have become the focus of the study, which form the basis of the individual's behaviour, prevalence in his or her social environment, consumer preferences and, according to the dissertation, his or her relation to material goods, and these values. Closely related to personal values and beliefs, voluntary simplicity is included as an independent variable. Simplification, such as the ability to reduce consumption and openness to small-scale consumerism, can alleviate the negative consequences of clinging to goods and pave the way for more environmentally conscious, responsible consumer behaviour and more effective enforcement of the principles of sustainability. Values and voluntary simplification may not only be important variables due to their internal motivator function, but may also be particularly important for the adolescent target group.

As an external circumstance - derived from the theory of personality development (Chapter 3.1) - a location was included, which is an unavoidable point of social contacts, while at the same time a representation of the socialization agents, and that is social media. Chapter 8 reveals that social media use has become a common daily routine today. Although the implications of intensive use are the subject of mainstream research, only a few of those are reported in the context of materialism.

In addition, a variable has been included, which on the one hand is a determining part of the living space and socialization of adolescents, and on the other hand well reflects the values and future prospects of young people, that being the type of high school. However, materialism, values, voluntary simplicity, and the type of high school have never been examined in the context of how this dissertation approaches them.

## 7. VALUES IN ADOLESCENCE AND THE THEORY OF VOLUNTARY SIMPLICITY

From the research results of the literature, we can conclude that in adolescence, materialism is primarily related to family circumstances, contemporaries, self-esteem, the media, and the socio-economic situation. At the same time, we have seen the consequences and phenomena of too strong a desire to acquire and possess material goods. It can be assumed that the examination of the variables learned in the previous chapters (antecedents and consequences of materialism) is frequently used in scientific studies, as the research results which may be expected with their application are obtained. Therefore, it is worth approaching materialism from a new or rarely researched paradigm. The conclusions of the literature review show that materialism is generally interpreted as a negative, undesirable phenomenon. As a circumstance, the weakening and elimination of this is equivalent to the avoidance of later evil. Chapter 3.6. highlights that firstly materialism cannot be eliminated and additionally may even serve as a tool for an individual coping strategy. The purpose of Chapter 6 is to present the value theories, concepts, and structures into which materialism can be interpreted in a novel context.

### 7.1. The role of values in consumption studies

A review of the literature reveals that the factors most influencing materialism in adolescence are the **attitude of family members** and the material and social status of the family; a **social comparison** of status in which peer relationships play a major role, and the strength of **self-esteem** associated with self-image instability. All of these have a direct impact on subjective well-being and life satisfaction. It can be stated that in the context of consumer socialization, attachment to material goods is one of the attributes of a life path determined and motivated by the above variables. Materialism, defined as a value by Richins and Dawson (1992), is an integral part of individual life strategies. Consequently, an important question is, what are the other values related to materialism?

However, is the meaning of materialism negative if it plays a motivating role in social mobility, advancement, and emergence from the narrower socio-economic environment? Or if materialism is one of the keys to preserving socio-economic status?

In addition to the destructive consequences of strong materialism, the above question may shade the perception of materialism. Considering that the dialect of subject (individual) and object (in this case consumer goods) is an insoluble and presupposed system of relations, the role of goods in self-realization, social relations, the pursuit of well-being and well-being may even be favorable and even desirable. Value scales widely used in consumer research can help empirically examine the relationship. Although there are results in the literature on direct contact with materialism, they are few in number and predominantly focused on adults.

Values, as cultural principles, express behaviours that are considered desirable by their bearers. Value concepts are used differently in different disciplines. In consumer research, values are standards for judging an individual's own behaviour and attitudes, as well as for judging others, which are internalized during socialization (Hofmeister-Tóth, 2014). Individual values can be terminal values and instrumental values for their realization (Rokeach, 1973); however, value preferences can also be examined as an imprint of the narrower and wider socio-cultural environment. According to Beck (1997), with the development of society - consolidation of social order, widening of social networks, increase in living standards, and the appearance of leisure time - the behavioural preference of the individual is reflected in the utilitarian satisfaction of needs.

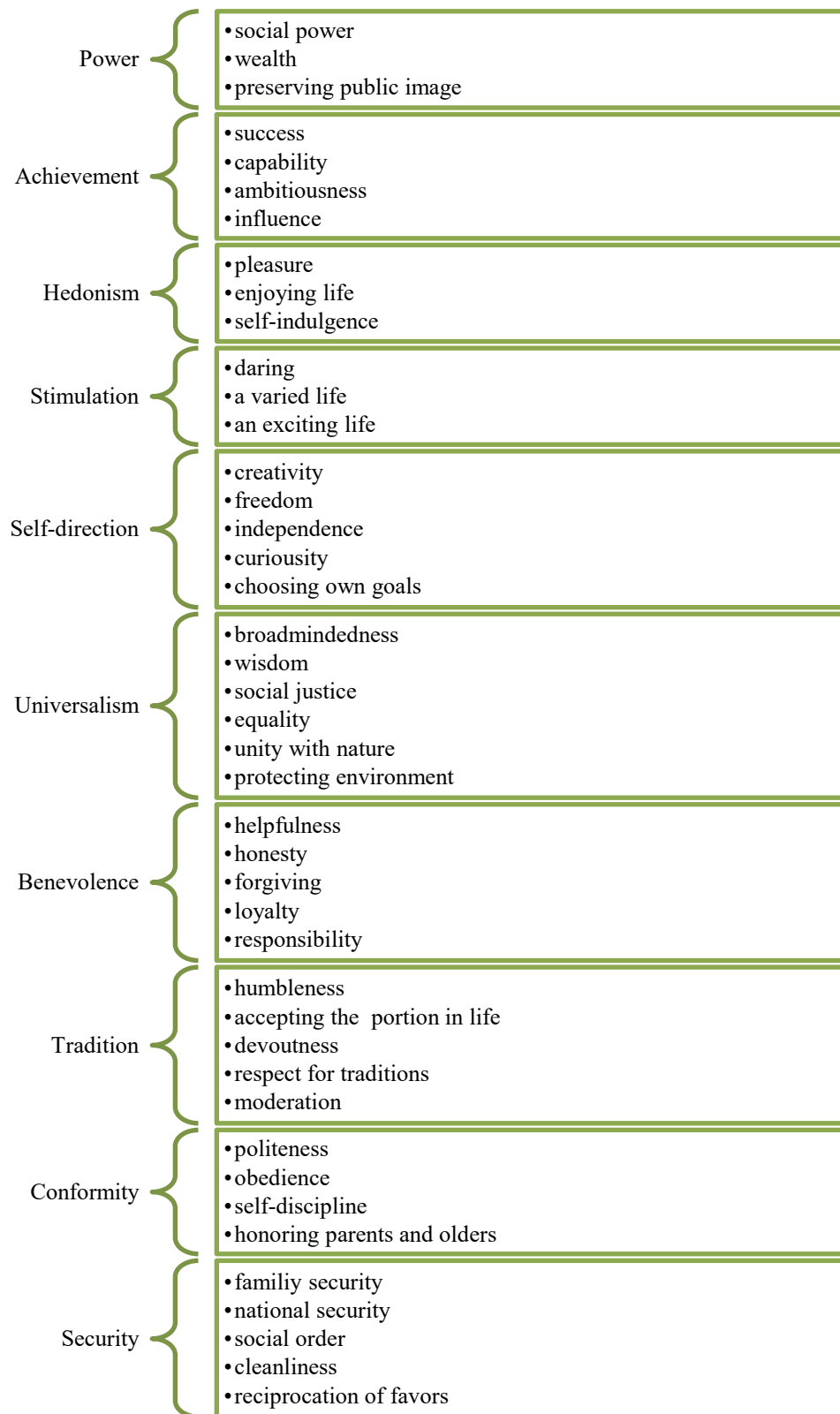
Inglehart and Rokeach's value concepts are often used in data collection in marketing and consumer research. **Inglehart** was one of the first to argue in *The Silent Revolution* (1977) that generations born after World War II, unlike their parents and grandparents, move towards post-material values; intangible goals and desires come to the fore among their aspirations. Inglehart's set of values aims to distinguish between material and post-material values. In his set of values, **Rokeach** (1973) distinguished 18 terminal and 18 instrumental values, which respondents should rank in a survey. The terminal side of the widespread range of values includes *happiness, inner harmony, and freedom*; while the instrumental side includes personal values - but can also be interpreted as personal traits - such as *courageous, obedient, independent, or ambitious*.

Although the reliability and adaptability of Inglehart and Rokeach value scales are solid, they are usually adapted in the adult age group. The reason for this is that for the younger age group, many values and statements are difficult or impossible to

interpret, let alone sort. Furthermore, understanding the meaning of most values requires relevant life experience and self-reflection. Therefore, there is a need for a set of values which can be used with great reliability among young people and teenagers, while the values contained in it should also be comparable with materialism. One of these is the List of Values (LOV) introduced by Kahle (Kahle et al. 1983), which contains Rokeach terminal values that can be interpreted not only at the individual level but also in the context of consumer behaviour (Beatty et al. 1985, Kahle et al.). LOV values can be classified in several ways. The difference between the values under internal and external control appears between them. *The sense of belonging, being well-respected, and security* typically depend on the social environment, and thus are under external control, while other values remain under personal internal control. Another grouping option is how to conform to values: whether they are interpersonal (*warm relationships with others, the sense of belonging*) personal (*self-respect, self-fulfilment*) or impersonal (*excitement, enjoyment in life*). However, when applying LOV, the researcher has to face the problem that the comparison of values with other variables can be carried out mostly along individual values and not in value dimensions or clusters. All this is confirmed by the results of the preliminary research in Chapter 8. It is therefore worthwhile to turn to a set of values that can be better distinguished by cluster analysis or grouping according to the dimensions defined by the value concept. Schwartz's stock of precious stones may be the most suitable for this.

According to **Schwartz's** synthesis (2001), values combine internal constructs such as beliefs, desires, rules, or criteria. Although the values always go beyond the current situation, the different decision situations can be influenced by the relative values according to their relative importance. All this is because the values can be sorted according to their importance; they have different weights for different people. According to Schwartz, the values can be divided into ten types of **motivational values**, which are summarized in Figure 4.

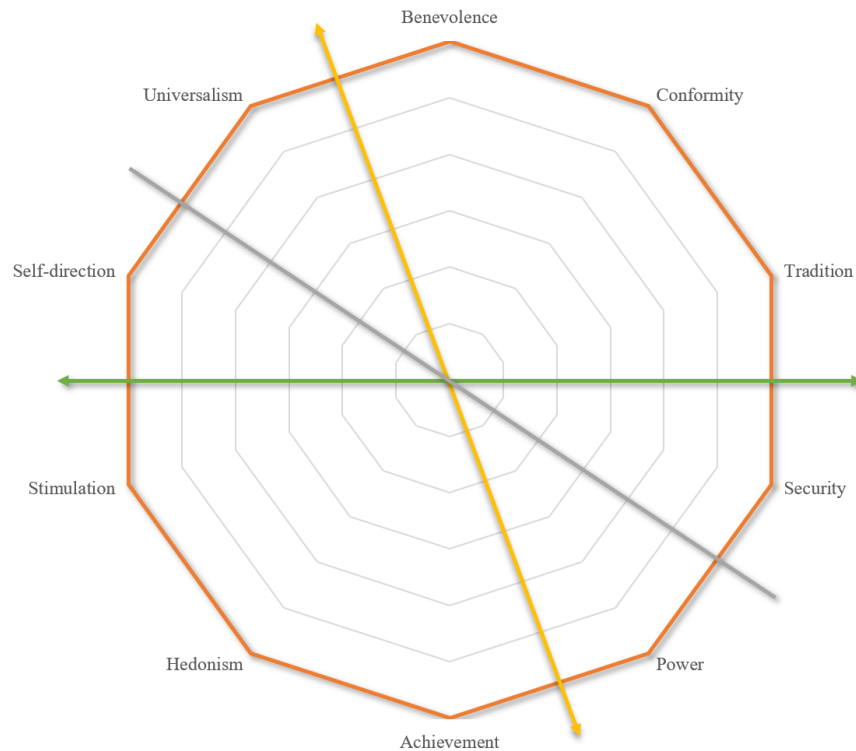
#### 4. Figure: Schwartz-value set



Source: Schwartz, 2001

Schwartz's set of values is best interpreted in the circumplex shown in Figure 5. Schwartz considers it necessary to divide the values into four dimensions, which are indicated by the yellow and green axes in the figure. At the opposite ends of the yellow axis are the values of **self-enhancement** and **self-transcendence**. Self-enhancement includes the values of *power* and *achievement*, which are aimed at the fulfilment of individuality and ego, traditionally individualistic value dimensions. In contrast, *universalism* and *benevolence* are associated with self-transcendence and these values can be interpreted as the striving to transcend the individual's own desires, to harmony with the social environment. The end of the green axis perpendicular to the axis of self-enhancement -self-transcendence (yellow) toward values of *self-direction* and *stimulation* indicates **openness to change** of the individual. *Tradition* and *security*, as opposed to openness, manifests the **conservatism** of the individual. Schwartz (2001) compared the level of materialism with each value and found that for both axes, a difference in materialism was observed with values in opposite directions. There is a difference, for example, between conservation and openness to change. While the importance of material goods is greater for the conversation, it is less important for openness to change. However, in addition to the usual division of Schwartz values into four, the sets of **individualistic** and **collective** values can also be well-identified (Bodor et al. 2019). Below the grey axis of Figure 5 are the individualist values and in the set above the axis are the collective values.

5. Figure: Schwartz-circumplex



Source: Schwartz, 2001

### 7.2. Values in adolescence and young adulthood based on the Schwartz value set

Schwartz values are usually examined through 21 statements. Each value has two statements, except for universalism, which consists of three statements. Respondents should rate on a six-point scale whether the content of the statement is completely relevant to them or not at all. Kapitány és Kapitány (2012) analyzed the Hungarian subsample of the European Social Survey (ESS) database collected in five waves between 2002 and 2010 (Table 6). The ranking of each value in the first and fifth waves in the under-18 age group is shown in Table 6. It can be seen that the value of *security* (the statement reads: *It is important for him to live in secure surroundings. He avoids anything that might endanger his safety.*) has fallen from first to fourth place. Behind which Kapitány és Kapitány (2012) speculate may be due to the economic crisis, the radicalization of the age group, and the co-intensification of self-assertion and spiritual values. *Hedonism* (*He seeks every chance he can to have fun. It is important for him to do things that give him pleasure.*) was already in first place in the third (2006) and

fourth (2008) waves (Kapitány & Kapitány, 2012, p. 123), which is why the authors assume to be explained by age-specific features and the pop-culture trends that amplify them. The strengthening of *benevolence* (*It is important for him to be loyal to his friends. He wants to devote himself to people close to him.*) is remarkable for its rise from an initial eighth place to second. As a possible reason for this change, Kapitány and Kapitány point to growing demands for moral values, fear of loneliness, and difficulties in making connections. It is interesting to see the decline of *universalism* from fifth to eighth, because the statement (*He strongly believes that people should care for nature. Looking after the environment is important to him.*) is aimed at environmental protection and environmental awareness, which is a youth-specific value that is characteristic of young people today. A socially unfavorable change is the decline of *universalism*, (*It is important for him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.*) from 13th place in the first wave (2002) to 18th place in 2010, and the value of *benevolence* for helpfulness (*It's very important for him to help the people around him. He wants to care for other people.*) falling from 12th to 17th. The latter change is also worrying because it ranks 8th in the full European sample (Kapitány & Kapitány, 2012). Behind the unfavorable changes, Kapitány and Kapitány assume the effect of negative individualization, which means the appreciation of individuals in a way that is not accompanied by the ideal of cooperation between individuals. All this is supported by the rise in popularity of the medium-ranked needs for *achievement* (*It is very important to him to show his abilities. He wants people to admire what he does.*) to third place and the rise of power from 20th to 11th.



6. Table: Schwartz-values ranking in the first (2002) and fifth (2010) wave of ESS

Statement	Value	2002	2010
He seeks every chance he can to have fun.	hedonism	2.	1
It is important for him to be loyal to his friends.	benevolence	8.	2
It's very important for him to show his abilities.	achievement	9.	3
It is important for him to live in secure surroundings.	security	1.	4
It is important for him to make his own decisions about what he does.	self-direction	3.	5
Thinking up new ideas and being creative is important for him.	self-direction	6.	6
He thinks it is important that every person in the world be treated equally.	universalism	7.	7
He strongly believes that people should care for nature.	universalism	5.	8
Having a stable government is important for him.	security	11.	9
He likes surprises and is always looking for new things to do.	stimulation	4.	10
He wants people to do what he says.	power	20.	11
It is important for him always to behave properly.	conformity	14.	12
He likes to take risks. He is always looking for adventures.	stimulation	16.	13
Being very successful is important for him.	achievement	15.	14
Enjoying life's pleasures is important for him.	hedonism	10.	15
Religious belief is important for him.	tradition	19.	16
It's very important for him to help the people around him.	benevolence	12.	17
It is important for him to listen to people who are different from him.	universalism	13.	18
It is important for him to be rich.	power	17.	19
He believes that people should do what they're told.	hedonism	21.	20
It is important for him to be humble and modest.	tradition	18.	21

Source: Kapitány & Kapitány, 2012. p. 123.

In 2008 (European Values Study, ESV) and 2016 (European Social Survey, ESS), a representative value survey was conducted in the 15-30 age group in Europe, taking into account a variety of social and individual values. From these data, Nico (2019) identified the value orientations of young people (Figure 6) by meta-analysis, comparing the responses of those younger and older than 30 years. Those under 30 identified the most with values such as equality, freedom; helping others, environment, creativity, tolerating difference, and the least with wealth and obedience. Those over the age of 30 did not identify at all with values such as having a good time, trying new things, gaining respect, obedience or success. For both younger and older people, family is the most important item followed by work; and religion and politics matter the least. It is worth mentioning that while today protection of the environment and the fight against climate change is not only dominant on the public eye, but is particularly prevalent among young people, in 2008, the majority of respondents could only be described as ‘observers’. Young people rather agreed with statements such as nature is strong enough to defend itself against human intervention; man can rule nature; and humanity’s inventiveness will solve the problem. Environmental protection plays a similar role in the Hungarian subsample. Based on the responses of the two studies, Nico (2019) distinguished four factors of value orientations. In addition to the value factors of Figure 6, the social values that are part of the main components due to their factor weight can be seen as components.

In addition to the meta-analysis, Nico (2019) points to the importance of the shift between *character* and *personality*. Psychology makes a clear distinction between personality and character. Personality can be characterized by its toolbox, that is, how the world sees the individual and how it can assert itself in the world. Based on this, the individual is more identifiable with his or her behavior and appearance. In contrast, character is more about the inner self, moral and mental abilities, the ethical values of the individual. According to Nico, society places more emphasis on personality, which influences young people's ability to shape their current life situation and personality rather than the structural context of their lives. This is due in part to socialization, as the individual must participate in the life of the social environment around themselves and become a useful member of it. “Youth as an age effect” plays a major role in the development of values. Youth is usually identified with democratic, progressive values, but as age progresses, priorities and concerns change, and the above values

lose their significance. Nico points out that by examining and understanding young people, values based on solidarity and equality can be strengthened and validated in society. In addition, community values can enhance the significance of *character*, the inner self, which could allow for a shift away from outward-looking *personalities* and their associated roles.

#### 6. Figure: Components of human values based on ESV and ESS



Source: Nico, 2019 p. 16.

### 7.3. The relationship between materialism and Schwartz-values

The relationship between Schwartz-values and materialism as well as consumer behaviour have been examined in several approaches. Research based on the response of nearly two thousand U.S. adults by Burrough and Rindfleisch (2002) found that materialism has a negative relationship with collective values such as religiosity, family, or community. According to the result of multidimensional-scaling data analysis of Burrough and Rindfleisch, materialism is located far from the self-transcendence values (*universalism* and *benevolence*), and close to the self-enhancement values (*power* and *hedonism*). In the context of the consumption of counterfeit products, Furnham and Valgeirsson (2007) found that the importance of traditions and a highly acquisition-oriented attitude negatively influence the propensity to buy counterfeits. Kilbourne and LaForge (2010) also examined the relationship between the self-enhancement and self-transcendence dimensions of Schwartz values in a U.S. sample. It has been shown that those for whom self-transcendence is more important are less material in the context of the dimensions of happiness and material success on the Richins-Dawson scale. Karabati and Cemalcilar (2010) found a strong causal relationship between materialism and Schwartz's values of *achievement*, *power*, and *hedonism*. In contrast, the dimensions of conservation (*tradition*, *security*, *conformity*) and altruism negatively affected materialism. In other research, the mediating role of materialism has been shown to be significant between the frequency of purchases between altruism (negative effect) and self-realization (positive effect) (Sevgili & Cesur, 2014; Kilbourne et al. 2005).

#### 7.4. The theory of voluntary simplicity

Our present and near future presents new challenges to humanity as finite natural resources and changing environmental conditions call for action. In order to preserve our planet and our living space, communities need take steps, the basis of which being individuals changing their habits. Voluntary simplicity as a way of life offers a solution to this. The first widespread definition was given by **Elgin** and **Mitchell** (1977) that **voluntary simplicity** means a life that is simple on the outside but rich on the inside, modest, and environmentally conscious. This approach represents a return to a human-scale living space for spiritual growth in the community. **Gregg** (1936) was the first to write about this in the scientific literature, advocating the attainment of a higher, spiritual state which could have served as the opposite of consumer society at the time. Although the voluntary simplicity movement was, in fact, a counterculture of consumption, an important feature is that it must be performed through one's own free will, not through coercion (poverty, unemployment, etc.). Reading Gregg's writings today, it can be seen that he pointed to the individual problems associated with consumer existence that only became common and mass movements much later, with the global completion of consumer society. He emphasized that with modernization and increasing the efficiency of production, societies have not become fairer and inequalities have not been attenuated. It is the responsibility of the individual to limit consumption and to exercise restraint in order to fulfil himself and the mutual well-being of his community. In addition, the simplicity stemming from self-restraint leads to inner spiritual development and growth. Gregg acknowledges that voluntary simplicity is an uncomfortable, sometimes limiting restriction on suffering, but at the same time states that discomfort is fundamentally a necessary part of human life, and even an essential condition for creativity and satisfaction. There is no doubt that inner spiritual development and creativity are post-material, that is, contrary to materialism.

Later, the aforementioned Elgin and Mitchell (1977) advocated the life principle of voluntary simplicity for reasons such as the energy crisis, terrorism and the vulnerability of developed nations, the growing need for developing countries to benefit equally from terrestrial resources, and the general malaise, aimlessness, and hopelessness that prevail in society. Although these are international mainstream concerns today, it is important to note that Elgin and Mitchell drew their conclusions solely from their research findings and observations in the United States. They were

visionary because their thoughts were formulated in the world's most developed economy of the twentieth century. Elgin and Mitchel distinguished four levels for those who embarked on the path of simplification:

- *Full voluntary simplicity*: who strive for simplification in all areas of their lives: backyard gardening, recycling, organic (or at least unprocessed) food, simple dressing, cycling, backpacking, family-centricity, meditation, development of their personality.
- *Partial voluntary simplicity*: less spectacular than the full simplicity level, but still stand out from the mainstream.
- *Sympathizers toward voluntary simplicity*: those who have not done so, or have done very little to simplify, but sympathize with the movement.
- *Indifferent, unaware, or opposed to voluntary simplicity*: who do not even know about the phenomenon: the group is largely made up of the poorer layers of society, but those with high socio-economic status are also present in large numbers, as simplification may jeopardize their status.

According to **Etzioni** (2004), voluntary simplicity can be contrasted with the hedonistic consumer behaviour in the consumer society and the market-influencing efforts that maintain it. He states that the target of voluntary simplicity is the repression of consumerism or consumer hedonism, and not the elimination of consumption (the satisfaction of needs through the acquisition of goods) in general. Voluntary simplicity can help in this, as the principle is that the increasing amount of valuable consumption contributes less and less to personal satisfaction, while simplification can meet higher needs: satisfaction, happiness, self-fulfilment, and can be interpreted as a new cultural phenomenon. Cherrier (2009) uses the term “culture jammer” to describe anti-consumption. While in consumption the goal is to curb conspicuous, compulsive, impulsive, trend-following decisions, in the field of work the goal is to find a profession, a career, and an occupation that is important for the person doing the work, as well as a way of earning money and keeping up appearances. This idea takes back the theory of modern and postmodern consumer society (Bauman, 2005) by calling for a rediscovery of the conditions that define modern (producer) societies. Etzioni also emphasizes voluntary simplicity must be based on free will. It cannot be a trigger for poverty, external (state or market) austerity, or loss of personal freedom. Etzioni performs the classification of simplifiers. He identifies *downshif*ters who voluntarily

give up consumer goods (often luxury goods) that they would otherwise be able to afford; *strong simplifiers*, that is, those who give up their high-income but highly stressful jobs in order to live a simpler life, even for much less pay; and *holistic simplifiers* who subject their entire lives to an ethos of voluntary simplicity. Based on Etzioni's classification, Ballantine and Creery (2010) concluded through in-depth interviews with New Zealand simplifiers that simplification was generally characterized by a reduction in consumption, avoidance of accumulation, and the acquisition of second-hand items. All of their simplistic attitudes were permeated by environmental concerns, and their key issues were nutrition, food production, and the consumption of ethical products.

In addition, in order to explain how the intention of voluntary simplification in consumer behaviour works in practice, it is worth approaching it from the hierarchy of needs. According to Etzioni, the individual must first meet the needs of the lower order in order to recognize that voluntary simplicity is a possible and viable way to meet the needs of the higher order. Zaveskoski (2002) classified higher-order and lower order needs. While lower-order needs (physiological, safety, belonging and self-esteem) can usually be satisfied with material goods, higher order needs such as self-efficiency and authenticity cannot. In the context of higher-order needs, such as credibility, Marx's explanation of alienation (see p. 18) reappears. If an individual does not take part in the production of the goods he consumes, he is in fact alienated from himself, because in the Marxian sense, production and the production of goods are one of the chief shapers and manifestos of the human personality. In conclusion, higher needs such as a sense of belonging or self-esteem cannot be met by goods produced by others that are merely consumed by the individual.

In the context of voluntary simplicity, therefore, the contribution of tangible goods to the fulfilment of the individual is limited and significant only at the level of inferior needs. Beyond all this, materialism, non-conscious, conspicuous and compulsive consumption are increasingly seen as unsustainable practices. Consumption, however, is much more than individual behaviour based on utilitarianism, financial considerations, or hedonism. Consumption today is a social, systemic, and political act which can have far-reaching consequences for the individual and their social environment. More moderate consumption and weaker material attitudes can make a significant contribution to making consumer society more

sustainable. Although there are empirically proven results on the relationship between materialism and voluntary simplicity, examining the relationship between these two variables is far from being the mainstay of research. In addition, the results available so far are contradictory. Nepomuceno and Laroche (2015) examined the relationship between materialism, personal debt, and voluntary simplicity among Brazilian banking customers. Among their results, materialism and voluntary simplicity were negatively related. By processing a large body of empirical and theoretical work, Kuanr et al. (2020) have hypothesized, that voluntary simplicity should have a positive relationship with materialism. The assumption is that materialists are self-centred individuals, and materialism is strongly aligned with the values of self-enhancement. Self-enhancement reflects a narrow self-perception in which the individual has less regard for other people and the living environment. It is indifferent until there is a threat that needs to be averted. For materialists, such a threat may be the narrowing of the enrichment of material goods due to adverse environmental consequences. To prevent this, the materialist individual may be willing to show greater openness to voluntary simplicity in order to satisfy his material desires in the future. The research of Kuanr at al in India (2020), involving nearly 400 respondents between the ages of 25 and 44, has succeeded in proving all of their hypotheses: the more material the individuals, the more they support the pursuit of voluntary simplicity. Materialism has a positive effect on life satisfaction and self-efficacy, which play an equally positive mediating role between materialism and voluntary simplicity. The contradictory literature findings raised the question: what is the real relationship between materialism and voluntary simplicity? Is it negative: more material people show greater voluntary simplicity? Or can sympathy for simplification emerge while being strongly attached to goods? The answer is important in several ways. If the relationship proves to be contradictory, it may provide another reason to reinforce the alternatives rather than stick to the goods, in addition to the unfavorable consequences for adults learned in Chapter 4. If the relationship is not necessarily contradictory, it may support the preconception that materialism becomes a tool of coping strategy in consumer socialization rather than a parallel simplification.



## 8. THE ROLE OF SOCIAL MEDIA USE

In today's transformed media environment, the spatial and temporal constraints of interpersonal communication, gathering information about others, and providing information about ourselves are constantly changing. While the early 2000s were primarily concerned with expanding Internet access and reaching as many settlements as possible, while at the same time increasing the number of Internet users, the period from 2010s to the present day is about the dynamic development of Internet networks, and the expansion of online solutions to personal and physical interactions.

Internet access is a prerequisite for using social media. According to NRC (URL1) in Q4 2020, the share of Internet users in Hungary accounted for 72.4% of the population over the age of 15, which accounted for nearly 6.2 million individual users. Although not all Internet users use social media, a representative survey of 4,000 respondents conducted by the National Media and Infocommunications Authority (URL2) in the fall of 2020 found that 98% of respondents visit social media sites online. The average daily time spent using social networking sites is less than half an hour for 26% of respondents, half an hour for 31%, one or two hours for 35%, and more than two hours for 9%. The two results show that there are very few examples of users with no profile, and 44% of internet users use a social site for more than an hour a day on average. These rates in other developed countries certainly cannot be lower.

Chapter 3.4 pointed out the correlations between materialism and media exposure. However, it can be seen that social media researches does not receive as much attention in the context of values and materialism. It is no overstatement to say that over the last ten years, the development of social interactions, public discourse, and social media sites have fundamentally influenced means of communicating information in general. There can be a hypothesized correlation between the frequency and intensity of their use and the motivation of their users, as well as their financial attitudes, goals and voluntary simplicity. The assumption is based on the phenomena that the users of the social media platforms, in addition to interacting with others, show a partially pleasing, favorable self-image of themselves through active content

creation; they partially observe similar activities of others; and shared content is used to facilitate remembrance. One of the drivers of these user goals is social comparison (see Chapter 3) which is accomplished on social network sites in such a way that the individual is simultaneously observing and being observed. The impression created by shared content can easily lead to a reassessment of your own life situation, your achievements thus far, or your satisfaction with life. At the same time, it can strengthen self-expression through material goods, material life goals, which are also highly visible in the case of visual-based platforms, or, on the contrary, voluntary simplification through the impression of the conscious behaviour of others.

According to Hum et al. (2011), social media can also be considered an independent cultural scene with its own set of norms and value-mediating effect. From the point of view of socialization, due to social contacts and roles, it can be called a special socialization scene. This is because by editing their profile, social media users create an online personality, play a role in their activities, and other users do the same. All this allows for role-taking, role-modelling and model-following similar to other arenas of socialization. The conditions for social comparison are given, the user is confronted with the events, experiences, freedom to consume and the extended self of the others on the timeline of the social network sites.

In an international sample of college students, Sheldon and Bryant (2016) examined the relationships between motivations for using social media in the context of social activity, life satisfaction, and narcissism. Observations and knowledge of others, documentation of life events, trendiness, and creativity have been identified as motivations for using Instagram. A positive relationship can be demonstrated between narcissism and the observation of others and trendiness motivation. However, they found a negative relationship between life satisfaction and motivation for Instagram trendiness. In terms of demographic variables, the results showed that women were much more active on Instagram than men were.

### **8.1. Social network site statistics today**

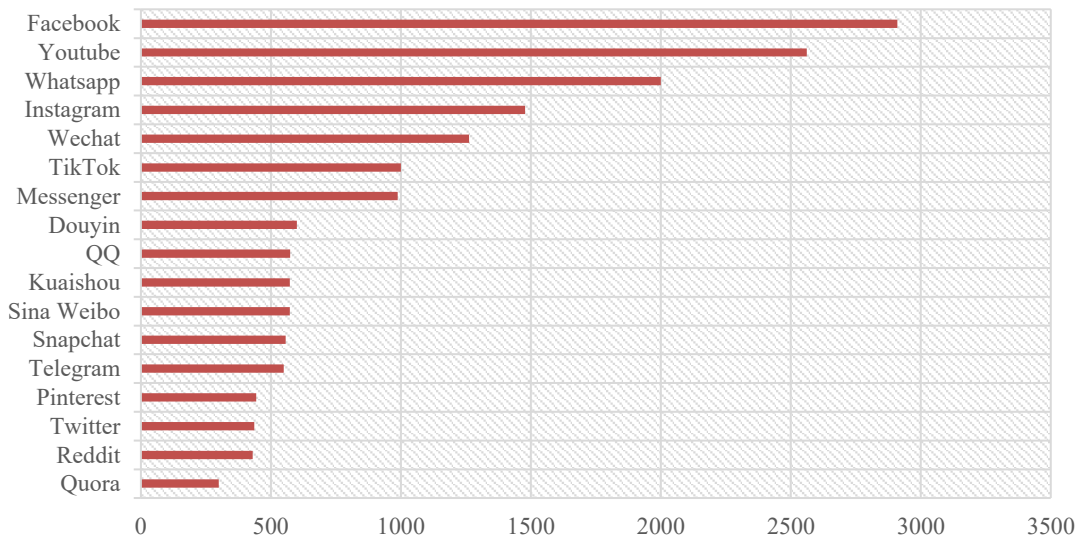
Nowadays, the use of social media has become almost inseparable from other functions of the internet. There are typically functional reasons for this. Many online devices, portals, features, or applications can be accessed through a social media profile, and many activities (signing-in, online shopping, etc.) require a Facebook or

Google profile. These findings are supported by the creative agency We Are Social (URL3) which has characterized global Internet usage every year since 2012 using databases such as GlobalWebIndex, Statista, GSMA Intelligence, App Annie, Semrush, SimilarWeb or Locowise. According to a report by We Are Social, two-thirds of the world's 7.91 billion people, 5.31 billion people, use the internet. More than 90% of Internet users (4.95 billion people and 62.5% of the world's population) are also social media users.

Figure 7 representing the agency's summary shows that the three most popular portals are Facebook, YouTube, and Whatsapp, with at least 2 billion users. Apps with between 1 and 1.5 billion users are Instagram the internationally-accessible, and Wechat, the multifunction platform used primarily in China. Interestingly, TikTok, which was only 6th in the same aggregation in 2020 with about 700,000 users, is now ahead of Messenger, which is one of the most significant direct communication applications. The results are less surprising when you consider that the most downloaded application in 2021 was TikTok. The ranking of Twitter is interesting, as although it is the number one medium in the business, technology and political arena, its total number of users is less than half a billion, as is the case with Reddit or Quora, which are primarily popular in the North Atlantic.

According to a database analysis by We Are Social, the number of users of social media sites is growing at an average rate of 10% per year. In a global aggregation, users spend an average of 2 hours and 27 minutes a day actively using social media sites (as a reminder, only 9% of Hungarian internet users spend more than 2 hours on their own admission).

7. Figure: Number of social media users (January 2022)

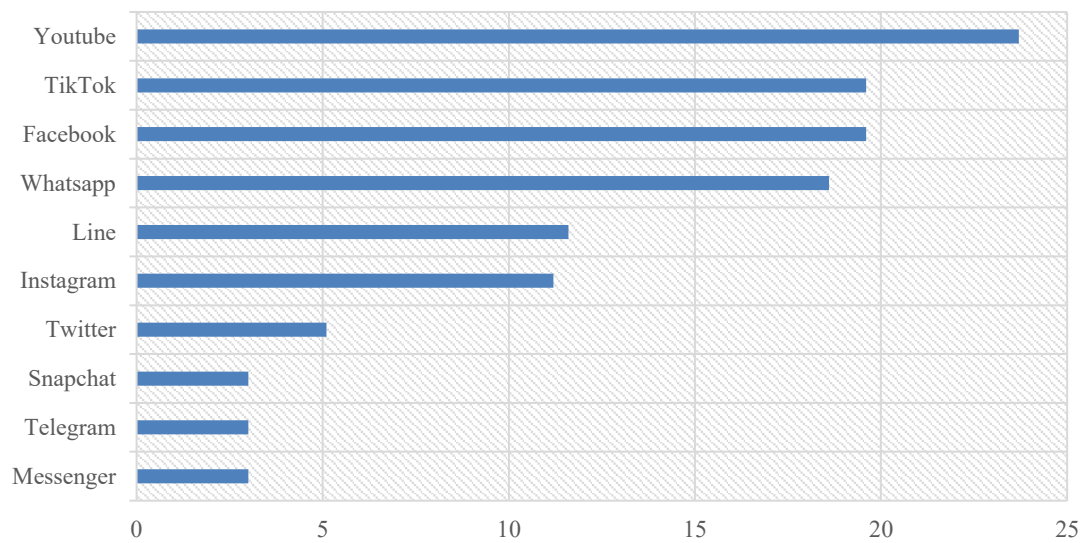


Source: We Are Social – Digital 2022: Global Overview Report

The extent to which social networking sites have become part of our daily lives is shown by the fact that this value was only an hour and a half in 2013, and in 2021, 35% of the time spent on the Internet was social media use. According to the agency's own global data collection 15.7% of respondents answered Whatsapp, 14.8% answered Instagram, and 14.5% answered Facebook on the question: *What is your favorite social media site?* The three top applications represent three platforms with different purposes: Whatsapp is an application for direct audiovisual communication and direct content sharing, Instagram is a visually-based platform, and Facebook is today a multifunctional, almost all-encompassing entity. Despite the self-reporting order of preference, it is clear that users spend most of their time on YouTube, followed by a tie between TikTok and Facebook, and Whatsapp is not far behind (Figure 8). On a monthly average, nearly one full day of YouTube usage may be because the platform is a content provider that provides longer, up to several hours of audio and video content. At the same time, the head-to-head results of TikTok and Facebook are thought provoking. The services and functions of Facebook are almost innumerable compared to TikTok, the main function of which is to share and consume short video, music, dance, dubbing and talent content. In fact, users spend an average of nearly 20 hours a month consuming review-quality, self-made videos. On the European continent, it is used only above the global average in Great Britain (27.3 hours/month),

Russia (26.3 hours/month), Germany (23.6 hours/month) and France (21.1 hours/month). Apart from Europe, the United States has the highest monthly use of TikTok, at 25.6 hours. Over the years, the situation of Instagram has changed significantly, from a portal based on simple image and video sharing to advertising dominated interface. Instagram ads reached 18.7% of the Earth's population over the age of 13 and 30% of all Internet users.

8. Figure: Average monthly time spent actively using social networking sites

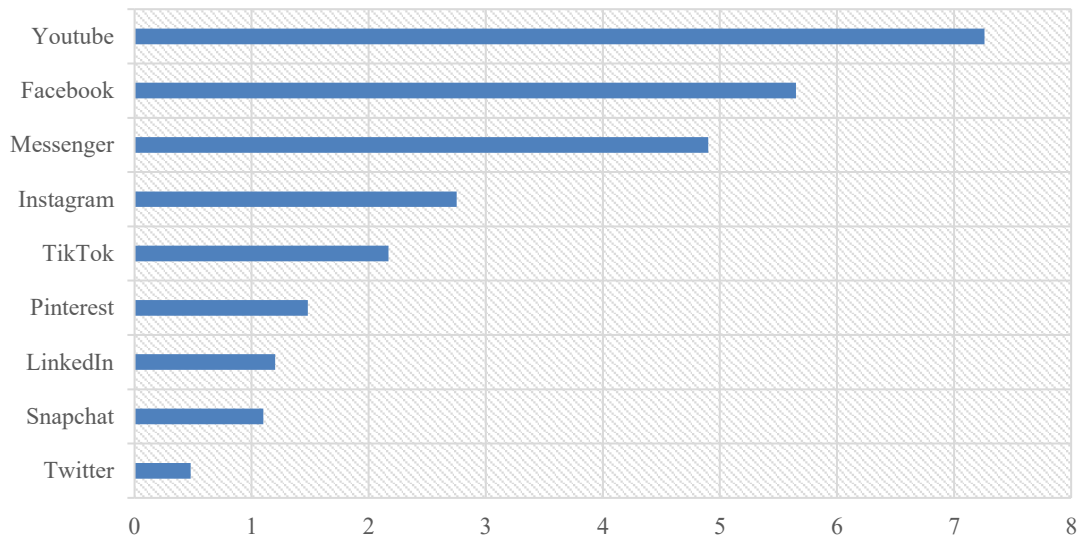


Source: We Are Social – Digital 2022: Global Overview Report

## **8.2. Social media statistics in Hungary**

The We Are Social Agency produces annual national reports from its own global database. The most important findings of the summary on Hungary (URL4) are the following: 75% of the 9.73 million inhabitants, that is 7.27 million people have some form of social media profile with the number of users of each platform illustrated in Figure 9. The priority of YouTube is best explained by Google's interest in the platform, so a YouTube profile is automatically created along with gmail.com email addresses and Google Accounts. It is likely that a significant portion of the more than 7 million users will not consciously edit their own YouTube profile. However, some 5.65 million Facebook users can already assume some level of awareness. Since a Facebook profile can be created from the age of 13, there are approximately 8.51 million residents who could have a profile. According to the comparison of the two data, 66% of the potential population for Facebook has already created a profile. The prominent position of Messenger compared to the global report (Figure 7) is not surprising because the use of Facebook is typically associated with the use of Messenger on a mobile phone. Compared to global statistics, Instagram coverage is exceptional: while 19.4% of the world's total population uses the application, this proportion is 28.6% in Hungary and 32.6% of those over 13 years of age. A similar distribution can be seen in the case of TikTok, with a global share of 12.9%, but 22.3% in Hungary. Strikingly, many also use Pinterest, which is by no means significant in global weight, while Snapchat follows approximately its global user share. The placement of LinkedIn, which is a platform exclusively for maintaining business and professional relationships and also plays an important role in human resource management, is thought-provoking. Creating a LinkedIn profile is possible over the age of 18, so it can be said that 15.1% of the potential population is registered on the site, which suggests a conscious, network-oriented attitude towards being in the job market. Like global trends, Twitter is a social network site in Hungary with a user base of just under half a million.

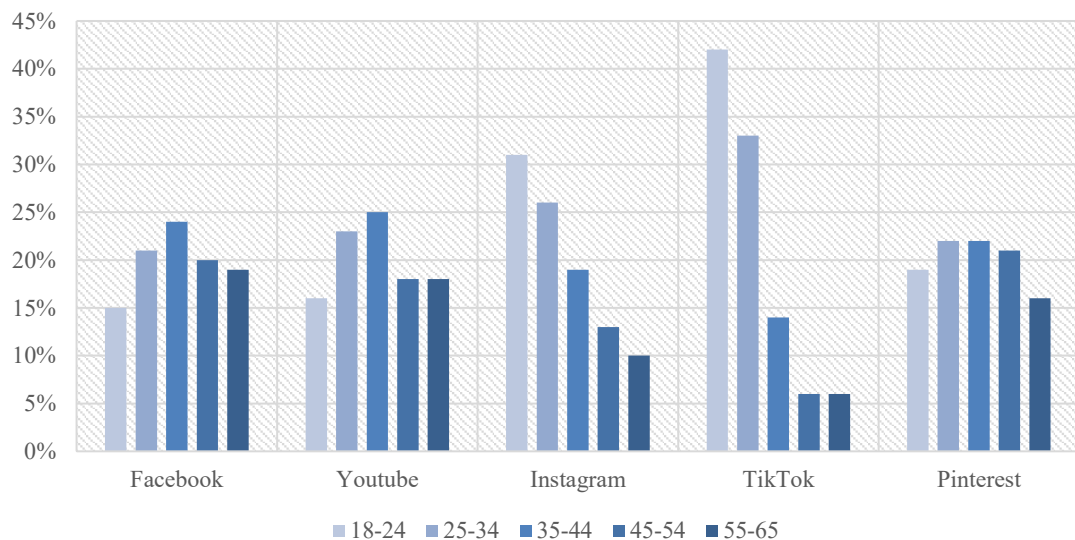
9. Figure: Number of social network site users in Hungary (January 2022)



Source: We Are Social – Digital 2022: Hungary

In 2020, ResearchCenter published an overview of the situation of social media sites in Hungary. The summary (Figure 10) has shown that while the distribution of users on the Facebook, YouTube and Pinterest platforms is approximately even across age groups, Instagram and TikTok users are predominantly young people aged 18-24 and 25-34.

10. Figure: Distribution of user age groups for each social networking site (2020)



Source: ResearchCenter – Social Media Map of Hungary 2020

As a pilot study to this dissertation, research conducted in 2017 (Debrecen & Hofmeister-Toth, 2018) and 2019 (Debrecen & Hofmeister-Tóth, 2020) on the frequency of use of Facebook, Instagram, Pinterest, YouTube, Twitter and Snapchat in the context of materialism and individual goals was also examined. Table 7 compared the responses of the 15-22 age group surveyed. The trend for Facebook is controversial, while the proportion of people who are always logged in has increased, so too has the proportion of people who never or rarely use it. Many more respondents on a regular basis also use Instagram, while the proportion of non-users has decreased significantly. The proportion of non-users of Pinterest has also decreased, but in this case, due to the nature of the portal, less frequent use has increased. Due to the lack of 2017 data, neither YouTube, Twitter, and Snapchat cannot be examined. However, Twitter data confirm that this format is less popular in Hungary. Although TikTok was not included in previous studies, based on the overview of Hungary (Figure 9) it can be a relevant and topical answer option and this worthwhile for scientific research.

7. Table: The frequencies of social media use based on own data collection

	Always logged in		At least once a day		At least once in few days		Never	
	2017	2019	2017	2019	2017	2019	2017	2019
Facebook	54.5%	64.3%	37.6%	17.9%	7.4%	15.5%	0.5%	2.4%
Instagram	38.1%	64.3%	27%	19%	11.1%	9.5%	23.8%	7.1%
Pinterest	3.2%	8.3%	2.6%	14.3%	15.4%	27.4%	78.8%	50%
YouTube	-	60.7%	-	32.1%	-	6%	-	1.2%
Twitter	-	2.4%	-	4.85	-	7.1%	-	85.7%
Snapchat	-	35.7%	-	16.7%	-	17.9%	-	29.7%

Source: Debreceni & Hofmeister-Tóth, 2020, Debreceni & Hofmeister-Tóth, 2018



### **8.3. The relationship of social media use and materialism**

When comparing young people in the U.S. and China, Chu et al. (2016) found a strong positive relationship between the intensity of social media use and materialism. Duan and Dholakia (2018) confirmed the correlation that less material persons post their experiences rather than their recently-acquired possessions. However, no significant relationship was found between materialism and social media activity. A comparison of samples taken in Arab countries and the United States by Kamal and co-authors (2013) found that Arab youth who are active social media users are much more material than their American counterparts. Similarly, more affluent Arab youth show a greater willingness to buy luxury goods than Americans do.

Colella and authors (2020) conducted a double experiment in a U.S. sample examining how materialism, perceptions of luxury brands, and consumer and brand interactions on digital platforms are interrelated. It has been shown that for more material consumers, access through social media sites can be more effective than branding on their own website. In addition, the materialism of consumers enhances the ability to recognize luxury brands.

Kim and colleagues (2021) also examined the relationship between materialism, hedonistic pleasures, trust in influencers, intent to buy, desire to belong somewhere, and attachment to sponsored content by interviewing adults (between 18 and 40 years) in the United States. The social media platform included in the study was Instagram. Their results demonstrated a positive relationship between materialism in reliance on sponsored Instagram ads and intention to purchase. Both the attachment to advertising and the relationship of purchase intention to materialism are mediated by hedonistic pleasures. The greater the user's confidence in the content-sharing influencer or the greater his desire to belong somewhere, the greater the mediating effect.

Neve and Trivedi (2020) examined the relationship between time spent using social media and following celebrities on social media sites with materialism among non-teenagers but still young people in India aged 20–25 years. Their research results showed a significant correlation between the variables studied: as time spent on social media increases, so does materialism, and the same is true of the increased interest in celebrities.

In addition to Facebook as the most popular social media site, the focus of this dissertation is primarily on visual-based platforms with the most users in Hungary (Figure 9): YouTube, Instagram, TikTok, Pinterest and Twitter. Of these, YouTube and Pinterest are special because they focus less on community building, communication between users, and more on content creation and consumption, for which creators and alter egos most often use a pseudonym as a public profile. Apart from this, the common motivation for using visual social platforms is to influence creativity, creative inspirations, and the tastes and preferences of others through one's own content. In fact, the latter (influencing tastes and preferences) is at the heart of the activity of professional influencer-agents, who consciously act as income-generating activities. Lee et al (2022) examined the motivation to follow Instagram influencers and identified four groups of motivations: credibility, consumption, creative inspiration, and envy. Influencers are authentic to users because they see themselves in them, they are ordinary people, and they have an attractive and live relationship with their followers. Consumerism plays a big role in their follow-up, meaning that followers are curious about new products and brands and open to discounts, as well as creative inspirations, as the influencer themselves seek to use the most attractive, stylish, innovative technical solutions possible. In the approach that social media is also a level of social interaction, envy is a notable motivating factor. An interesting research finding by Lee et al. (2022) is that in addition to a higher degree of envy, buying under the influence of influencers is more common. With regard to materialism, it was concluded that the more material the individual, the stronger the motivational factors, which the authors explained by the situation of social comparison. In other words, given that materialists are more exposed to the negative consequences of the comparison, they are more concerned with the relationship with influencers, seeing them as a personal role model, and using them as a source of information regarding consumption and branding. As the role of social comparison is decisive in the development of materialism, the current dissertation devotes a chapter to it (see Chapter 3.2). Among the research questions, in addition to the motivational factor of visual social media use creativity, the observation of others also plays a role.

## 9. THE POSSIBLE RELATIONSHIP BETWEEN SCHOOL TYPE, MATERIALISM AND INDIVIDUAL VALUES

Although the causal relationships of materialism are highly diverse (see Chapter 3) the school type chosen by adolescents has never been included in studies, despite the fact that school is one of the main scenes of adolescence and peer relationships that have a significant influence on the development of self-esteem. At the same time, in the present study, the school type is not interesting primarily due to the experience gained at school or the social relationships that develop there, but to the motivations and latencies that can play a decisive role in further learning. It is not absolutely necessary, or even possible, to prove with research results that the choice of a post-primary **general secondary education** (gimnázium), **secondary vocational education** (technikum) or **vocational education** (szakképző iskola) is influenced not only by learning outcomes and cognitive abilities, but also by educational expectations of the individual and his or her immediate social environment, as well as future prospects. There is no doubt that they apply to general secondary education mainly for the purpose of later further education, to secondary vocational education for the possibility of further education and marketable vocational training, and to vocational education for the acquisition of the basics of a profession or trade. In the latter case, the school years are typically followed by immediate entry into employment. However, what is the difference between the school types in Hungary?

*"Gimnázium (**general secondary education**) is an educational institution with four, six or eight - in the case of language preparatory grades - five, seven or nine - grades, where basic education and preparatory education for the state examination (érettségi) and the commencement of higher education is provided."*

(Act CXC of 2011 on public education 11.§ (1)).

Secondary vocational education and vocational education are organized under the umbrella of **vocational education and institution**:

*“The vocational training institution provides vocational education and vocational training for the profession specified in the list of professions. Vocational education is provided in a) sectoral primary education and b) specialized education based on training and outcome requirements. Within the framework of vocational education, unless otherwise provided by this Act or a Government decree, education in accordance with the general knowledge framework curriculum is provided in parallel with or independently of sectoral basic education and specialized education.”* (Act LXXX. of 2019 on vocational education 19. § (1)). Among the vocational training institutions, the secondary vocational education is an institution which:

*“a) lays the foundations for general education, preparing for the state examination (érettségi) and the vocational examination, and promoting further higher education or employment, or*

*b) with a high school diploma, it has only the number of grades specified in the professional register.”*

(Act LXXX. of 2019 on vocational education 20.§ (1)).

In addition, **vocational education** is a secondary institution that:

*“a) provides the general education and vocational training necessary for the acquisition of the given profession, or b) has only the number of grades preparing for the professional examination specified in the professional register.”*

(Act LXXX. of 2019 on vocational education 21.§ (1)).

The most important difference between the three school types is that general secondary education (gimnázium) prepares students primarily for higher education and further studies, teaching only general subjects (natural sciences, Hungarian language and literature, history, etc.). While one of the aims of secondary vocational education (technikums) is also to graduate after grade 12, but the acquisition of professional knowledge is provided at the expense of more in-depth general education. As a third type, the goal in vocational education (szakképző iskola) is to meet only the training requirements of a given profession, with a minimum or lack of general education. The

relevance of involving school types in research may be derived from student motivation. It can be assumed that the goals of high school students are long-term, more abstract, they have a good chance of gaining admission to higher education, and the commitment to occupation and specialization - with a few exceptions such as medicine, law, science - takes place only years later. On the other hand, in secondary vocational education, despite the fact that further studies become possible with the acquisition of a certificate of state examination, the need and compulsion to get a job as soon as possible and to choose a profession, appears very strongly. At the same time, it provides boost to opportunities to obtain a job and earn money, and to create an independent existence at a young age. In vocational education, the goal is clearly for the student to become a young specialist in a given profession as a teenager and to work in the chosen field as soon as possible.

The earlier a teenager or a young adult starts working in a field, the sooner they earn a regular independent disposable income. This disposable income is usually accompanied by a desire to establish an independent existence as soon as possible. As the freedom to consume and consumer spending power may increase along with self-disposable income (see Chapter 1), attitudes that focus on the acquisition of goods and measure success in materials may also increase. This phenomenon raises the need to explore the relationship between the choice of vocational training institutions and materialism.

However, school choice is influenced not only by personal, internal motivations. In Hungary, from September 2020, students in grades 9-10 of secondary vocation education and 9th grade in vocational education will be entitled to a significant amount of regular monthly scholarships. The amount of the benefit is compared to the one-month amount of the prime cost of specialized education specified in the Finance Act, which is currently 167,400 HUF/month, but from 1 July 2022 it will change to 100,000 HUF/month (Act XC of 2021 on finance 68.§ (4) a) point). According to the Innovative Training Support Center (URL5), grade 9-10 students in secondary vocational education (technikum) of 2021/22 will receive a monthly stipend of HUF 8,370 (5% of the cost) and HUF 8,000 (8% of the cost) from September 2022. In vocational education (szakképző iskola), this amount is HUF 16,740 (10%) per month in 2021/22, falling to HUF 16,000 (16%) per month from September 2022. In grades 11 and 12 of secondary vocational education (technikum) and in grades 10 and 11 of vocational

education (szakképző iskola) students have the opportunity to work in a dual-employment company corresponding to their field of specialization, and they will no longer receive a scholarship. If they do not have the opportunity to work for a company in the upper grades, their studies will still be eligible for a scholarship. The monthly amount of the scholarship is determined based on student marks, in the academic year 2021/22 it ranges from HUF 8,370 (with marks averaging from D to C equivalent) to HUF 58,590 (from B to A equivalent).

## **10. INCOME AND CONSUMPTION INDICATORS OF THE POPULATION OF HUNGARY**

The review in chapter 3.5 demonstrated a link between materialism and the development of the individual's living space, social environment, income situation, and satisfaction with material objects. Despite the fact that wealth, consumption and satisfaction statistics are not produced with a focus on adolescents who are the target group of the present dissertation, it is worth examining the situation of the entire population.

According to the database of the Central Statistical Office (CSO), in 2021, the total population of Hungary was 9,730,772 (CSOa). Apart from the 1.7 million in Budapest, the population is roughly evenly distributed between Pest County and six other regions<sup>18</sup>. The Northern Great Plain region has the lowest population, 871,105 (9.0%), while Southern Transdanubia has the highest, 1,435,131 (14.7%). The employment rate among the 15-64 age group (CSOb) is the most favorable in Budapest (78%), followed by Central Hungary (77%), and Western Transdanubia (76.4%) and

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<sup>18</sup> Central Hungary = Budapest and the county of Pest

Central Transdanubia = including the counties Fejér, Komárom-Esztergom, and Veszprém

Western Transdanubia = including the counties Győr-Moson-Sopron, Vas, and Zala

Southern Transdanubia = including the counties Baranya, Somogy, and Tolna

Northern Hungary = including the counties Borsod-Abaúj-Zemplén, Heves, and Nógrád

Northern Great Plain = including the counties Hajdú-Bihar, Jász-Nagykun-Szolnok, and Szabolcs-Szatmár-Bereg

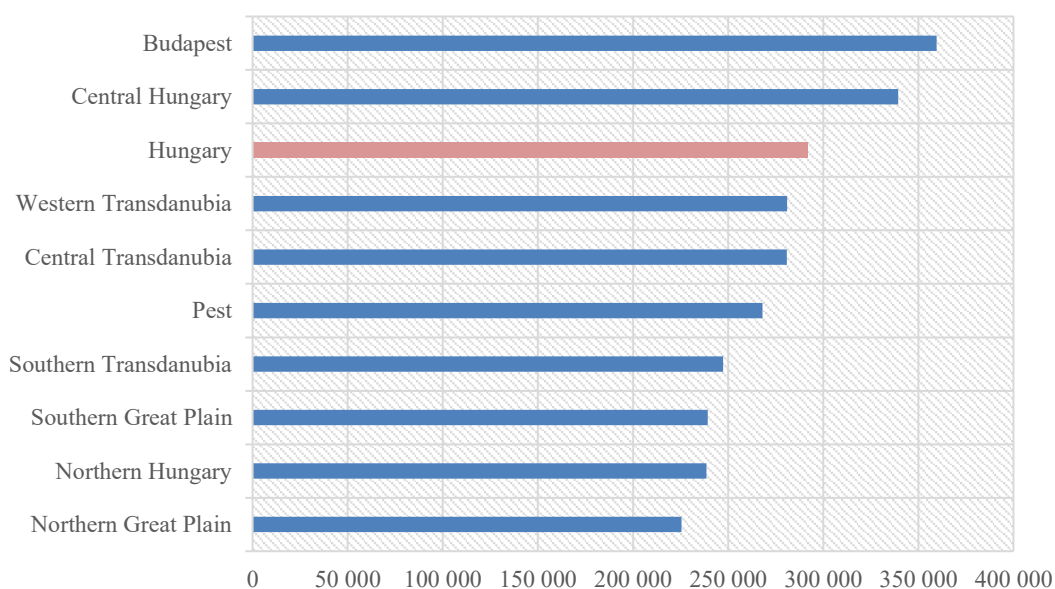
Southern Great Plain = including the counties Békés, Bács-Kiskun, and Csongrád-Csanád

the lowest in Northern Hungary (67.3%). Employment rate is a fundamental antecedent of household income, spending power and the freedom of consumer choice.

Unsurprisingly, the order is reversed based for the unemployment rate, which is the lowest in the Central Transdanubia region (2.1%) – with Budapest only placed the third in this comparison (2.9%) and the highest in the Northern Great Plain region (7.2%).

Figure 11 illustrates the average monthly net earnings of full-time employees in 2021 (CSOc). It can be seen that only the earnings of those employed in Budapest exceed the national average, every other region including the county of Pest remains below. Undoubtedly, this can be explained by the GDP per capita, which is by far the highest value of 10.2 million HUF/person/year in Budapest in 2020 (CSOd). It is only 3.9 million HUF/person/year in the county of Pest, the national average is 4.9 million HUF/person/year, while the lowest in the Northern Great Plain at 3.2 million HUF/person/year. The contribution of productivity to the national average is also in line with this, with capital producing 207.2% of the national average, while in this respect the second most developed region, Western Transdanubia, accounts for only 95.2%.

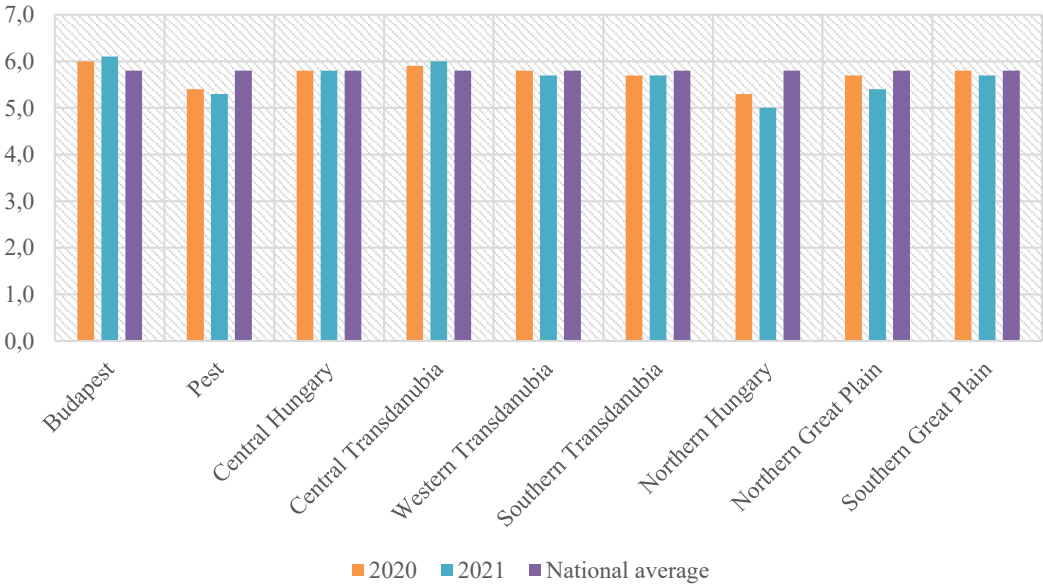
11. Figure: Average monthly net salary of full-time employees (2021)



Source: own editing, based on CSOc

In addition to the development of average salary, the satisfaction of households with their financial situation can be answered by the annual satisfaction surveys conducted by the CSO (CSOe). When collecting data involving eight factors (e.g., home, current job, etc.), respondents should rate on a scale from 0 to 10. Zero expresses the most definite dissatisfaction and 10 expresses total satisfaction. Figure 12 illustrates that in 2020 and 2021 only in Budapest and the Central Transdanubia region were residents more satisfied than the national average (5.8 in both years).

12. Figure: Household satisfaction with their financial state (2020 and 2021)



Source: own editing, based on CSOe

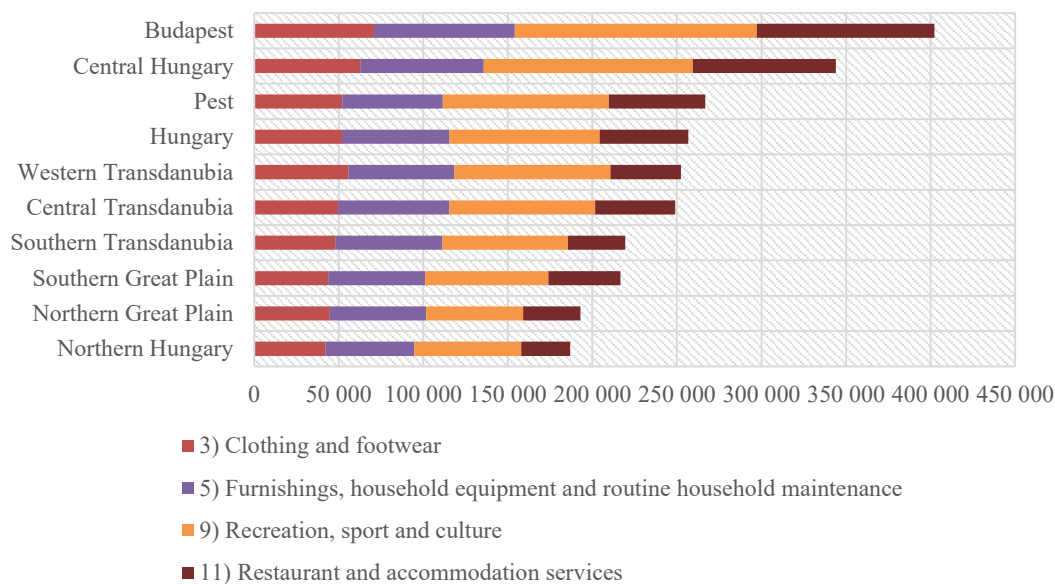
However, it is important to take into account that even the answers of those most satisfied with the financial situation give an average of only 6.0-6.1, which can be said to be moderately satisfied on a 0-10 scale. The average salary, the financial state of households and their satisfaction with that fundamentally determine the freedom of consumer choice, as well as the structure and dynamics of consumption. All of this is closely related to the strength of materialism, the extent to which goods contribute to a sense of happiness, the perception of success in material goods, or the need for ever more experiences of acquisition and possession. In order to assess the economic conditions of the population, it is worth examining the proportion of goods and services spent on. This is facilitated by data collection at the method of Classification



of Individual Consumption by Purpose (COICOP), that is the grouping of household expenditure according to the purpose of consumption. The COICOP methodology usually classifies household spending according to 12 product and service areas. The categories are: 1) food and non-alcoholic beverages, 2) alcoholic beverages, tobacco and narcotics 3) clothing and footwear, 4) housing water, electricity, gas and other fuels, 5) furnishings, household equipment and routine household maintenance, 6) health, 7) transport, 8) information and communication, 9) recreation, sport and culture, 10) education services 11) restaurant and accommodation services and 12) other goods and services. In terms of materialism, out of 12 COICOP categories clothing and footwear (3) and furnishings, household equipment and routine household maintenance (5) may be important. This is because in product groups 3) and 5) the goods that the individual can be attached to in the long run and from which he or she would desire ever greater quantities can appear the most. However, in addition to materialism, recreation, sport and culture (9) and restaurant and accommodation services (11) can be important. These last two categories are not goods but services covered by the household's discretionary disposable income. In materialism research, the connotative meaning of statements to be evaluated by respondents, such as *"It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like."* and *"I like a lot of luxury in my life."* or *"I'd be happier if I could afford to buy more things."* may relate to the experiences in service groups 9) and 11) without any specific proof. Based on the above, the spending structure of the Hungarian population is illustrated according to the product and service range 3), 4), 9) and 11) in Figure 13. The bar charts based on the Central Statistics Office COICOP database (CSOf) illustrate well that the population in Budapest spends the most on the four product categories examined. The total average value of COICOP consumption in Budapest is almost 1.8 million HUF/person/year, while the Northern Great Plain is in the last place with an average value of 1.13 million HUF/person/year. In Hungary, Northern Hungary and the Northern Great Plain spend the least on the examined product categories. The high proportion of consumption in the capital for cultural purposes and in hospitality within the higher absolute consumption is noteworthy.

13. Figure: Annual expenditure per capita according to COICOP database

HUF / person / year (2020)



Source: own editing, based on CSOf

Budapest residents spend on average 1.8 times more on culture and entertainment, and 2.5 times more on hospitality and accommodation services than in other regions of the country. These proportions are much lower for clothing and footwear (1.4 times more) and for furnishings (1.3 times more). In summary, it can be stated that the largest purchasing power in Hungary is generated in the capital in the form of net average earnings and average annual household income. Nevertheless, households in Budapest are not particularly satisfied with their financial situation, even though they have the highest average satisfaction. Examining the structure of expenditures that can be more closely or loosely linked to materialism, as in the case of income, the market volume of the capital is outstanding, the annual averages per capita are multiple for all regions.

## 11. PRELIMINARY STUDIES

Although the research issues of the present dissertation will be dealt with only in Chapter 11, several pilot researches related to the topic have been conducted during the doctoral program. Data collection tools and data processing methods have been modified to refine the research design; however the objectives focus on the relationship between young people's materialism and value orientation and the impact of social media use on this relationship. In this chapter, the results of three antecedent studies conducted between 2017 and 2019 are presented.

### 11.1. Results of a quantitative study from 2017: relationships between materialism, values, and social media use

The results of a questionnaire survey of 189 high school students between the ages of 15 and 19 in 2017 were presented at the 6th International M-Sphere Conference and published in the *International Journal of Multidisciplinary in Business and Science*. (Debrececi & Hofmeister-Toth, 2018). The survey consisted of LOV value sets (Kahle et al. 1983) and Goldberg's Youth Materialism Scale (Goldbert et al. 2003), which is abbreviated as YMS. Among the elements of LOV, safety, fun and enjoyment of life, good relationships with others and self-realization proved to be the most important. Out of the 10 YMS statements "*The only kind of job I want when I grow up is one that gets me a lot of money*" and "*I would be happier if I had more money to buy more things for myself.*" received the highest response rate. By principal component analysis, two factors could be identified from the YMS: money orientation and acquisition, possession factor, the significant relationships of which to the value set are shown in Table 8.

8. Table: Correlation of Youth Materialism Scale factors and List of Values

<b>LOV</b>	<b>YMS</b>	<b>Money orientation</b>	<b>Acquisition, possession</b>
Being well-respected	.310**	.267**	.232**
Security	.210**	.231**	.192**
Material success	.343**	.491**	-
Sense of accomplishment	-.183*	-.228**	-
Sense of belonging	.170*	-	.182
Warm relationship with others	.165	-	.160*
Self-fulfilment	-	-	.182*
Self-respect	-	-	.172*

\*significant at 5%; \*\*significant at 1%

Source: Debreceni & Hofmeister-Tóth, 2018

The correlations reveal the strong relationship of materialism with social recognition, material success, and the pursuit of security, while at the same time the non-material nature of the sense of accomplishment. What is interesting are the positive correlations between the sense of belonging, warm relationships with others, and self-fulfilment, even if the relationships are weak. It is also noteworthy that although entertainment and enjoyment in life were highly important to the respondents, their relationship with materialism was not significant.

Part of the research design was the Uses & Gratifications Scale (U&G), already implemented in Sheldon and Bryant's (2016) research, which examines the motivations of respondents for social network sites. Four of the five factors distinguished by principal component analysis showed a significant relationship with the main mean of YMS or YMS factors (Table 9).

9. Table: Correlations of U&G-scale and YMS factors

Uses & Gratifications	YMS	Acquisition, possession	Money orientation
<b>Factor 1: Creativity and self-extension</b>			
To share my life with other people			
To depict my life through photos			
To create art	.229**	-	-
To document the world around me			
To remember something important			
To show off my photography skills			
<b>Factor 3: Surveillance and knowledge about others</b>			
To follow my friends			
To see what other people share	.190*	.150*	.217*
To see “visual status updates” of my friends			
To “like” my followers' photos			
<b>Factor 3: Coolness</b>			
To self-promote	-	.147*	.284**
To become popular			
To find people with whom I have common interests			
<b>Faktor 5: Friendship</b>			
To interact with my friends			
It is fun	.158*	-	-
To provide “visual status updates” for my friends			
*significant at 5%; **significant at 1%			
Source: Debreceni & Hofmeister-Tóth, 2018			

The influence of social media use was demonstrated by regression analysis. The dependent variables for the three models of multiple linear regression analysis are the main mean materialism, the acquisition, possession, and money orientation factors. Table 10 summarizes the variables included in the analysis, their significance, and the characteristics of the three models. At a significance level of 5%, all three models were found to be significant. The independent variables significantly influenced the outcome of dependents such as the mean of acquisition, possession, and YMS main average. While surveillance and coolness had all three dependent variable effects, friendship was limited to materialism; and the gender of the respondents only affected acquisition and possession.

10. Table: Multivariable linear regression model involving YMS and U&G factors

Independent variables	YMS		Acquisition, possession		Money orientation	
	B	$\beta$	B	$\beta$	B	$\beta$
Creativity and self-extension	0.163*	0.138*	0.177*	0.177*	-	-
Surveillance and knowledge about others	0.257**	0.217**	0.188**	0.188**	0.150*	0.150*
Coolness	0.336**	0.284**	0.184**	0.184**	0.147*	0.147*
Friendship	0.161*	0.136*	-	-	-	-
Gender	-	-	0.555**	0.269**	-	-
R <sup>2</sup>	0.406		0.418		0.211	
F-value	9.096		9.740		4.318	
Significance	0.000		0.000		0.015	

\*significant at 5%; \*\*significant at 1%

Source: Debreceni & Hofmeister-Tóth, 2018

Quantitative study results evoked the need for a qualitative research on what the studied variables imply for the target group. After lengthy preparation and multi-step methodological fine-tuning, this took place in the spring of 2018.

### **11.2. Results of a qualitative study from 2018: examination of the relationship between materialism, happiness, success and experiential consumption among teenagers**

Research in 2017 has revealed the research questions that can best be answered by information gathered using qualitative methods. What does success or happiness mean for teenagers? What is the role of experiences in teenagers' consumption? Do the meanings of the concepts relate to the item possessed or the money? What does it mean for young people to be material, what do they think when it comes to money or a status symbol? The results of a series of interviews with 12 participants and 2 classes of a secondary vocational school (technikum) were published in the scientific journal *Vezetéstudomány* (Budapest Management Review) in 2020.

Interviews were conducted using a happiness collage (Chaplin et al. 2014), participants were required to construct a collage of their own happiness from images of five pools: *people*, *material goods*, *achievement*, *sports*, and *recreation*. They had to choose the images that depict the things, goals, activities that contribute the most to their happiness. Each pool contained four images (options), except for *recreation*, with six options. Participants could choose one picture from each pool, but up to three from the *recreation* pool. The *people* pool included the most common reference groups: family, friends, schoolmates, and subculture depiction. The pool of *material goods* presented different goods through well-known brands: car, telephone, new clothes, money. The pool of *achievements* includes options that young people can understand and evaluate with the help of their life experiences: school performance, competitive success, creation, media career. The options of the *sports* pool were workout, running, football, tennis. This is explained by the fact that working out is very popular among teenagers, and running requires neither preparation nor equipment, it has no financial implications and manifests the experience of liberation and displacement. Football is the most popular team sport, and tennis is an elite sport. *Recreation* formed a miscellaneous pool, representing activities close to teenagers: music, reading, private room, camping, game console, makeup. Interviewees recognized and understood the options in the images. In making their decisions, they were able abstract from the brand or the circumstances of the activity depicted. Table 11 summarizes the images they selected, thus those that contribute the most to their own happiness.

11. Table: Summary of happiness collage

Interview type	People	Material goods	Achievement	Sport	Recreation
Personal in-deep	family (3)	clothes (3)	school (4)	running (5) workout (1)	music (5) makeup (2)
	friends (3)	car (2) money (1)	sport (1) creation (1)		nature (4) room (2) books (2) online game (1)
Group	family	money	school	running	music, nature
	family	money	sport	running	music, nature

In brackets: frequency of selecting the option

Source: Debreceni & Hofmeister-Tóth, 2020

Not surprisingly, family and friends dominated the *people* pool. Participants have confirmed that their sense of happiness is fundamentally determined by the quality of human relationships. It has been said that *material goods* contribute more to their personal happiness through the function of the goods. At the same time, money is as a threshold condition, according to them, a certain degree of material well-being is essential for their happiness, such as covering the expenses of the household, meeting basic needs, and freedom to spend. Of the *achievements*, school performance contributed the most to young people’s sense of happiness. As we will see later, this factor was also of paramount importance in the group tasks. The significance of the learning outcomes can be assumed from the life situation of the students: on the one hand, it is essential for achieving the life goals and for the career path, on the other hand school performance is an everyday success factor. However, they represent not only compliance with external expectations, but also their own subjective standards. The collage method was part of an in-depth interview with one of the questions about satisfaction. Participants confirmed that changes or the balance in school grades are the basis for an individual's sense of failure or success. Of the *sports* pool, interviewees chose running almost exclusively. Their responses confirmed our preliminary assumption that running as the form of movement requiring the least objective conditions is the most obvious, but exercise is also important to them because of body shaping. The frequent selection of music came as no surprise from the *recreation* pool. Proximity to nature is also very important for students. In their explanations, the motive of liberation and dissolution appeared, as well as the company and gaining

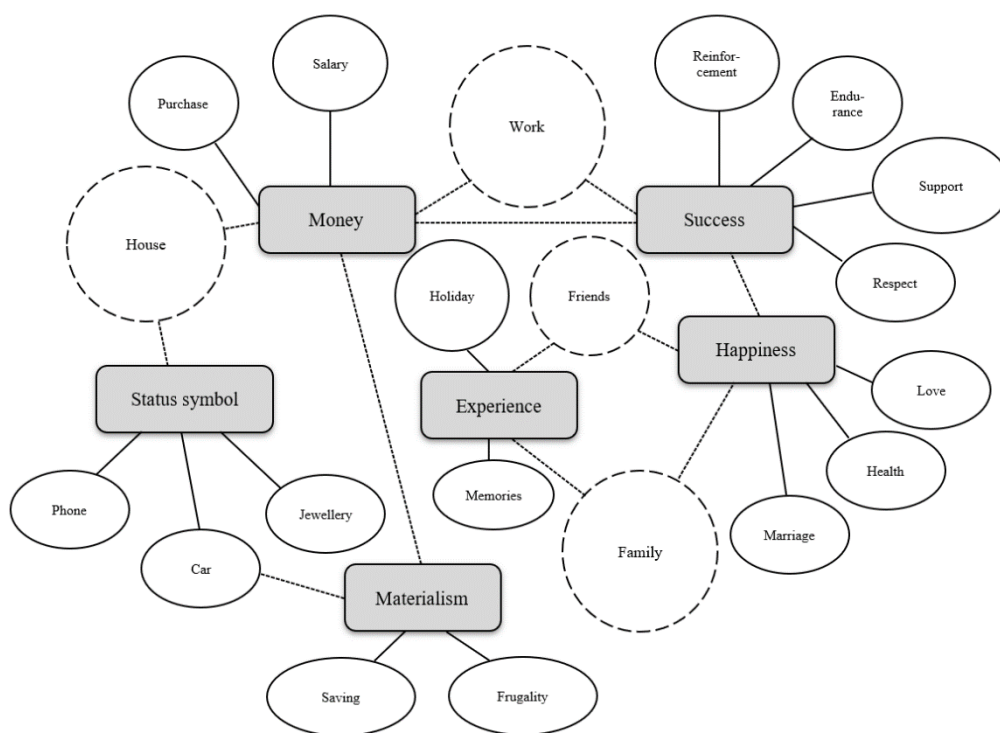


experience as drivers. The answer to the question, “*With whom?*” is more important than where and how they are connected.

In addition to in-depth interviews, we carried out an association-based exercise in two classes. We were looking for answers on the questions: *what contributes most to the happiness of young people? What do concepts such as money, success, happiness, the status symbol, experience, and materialism mean to them?* The task of the participants was to associate thoughts related to the above concepts. First, the associations referring to the concepts had to be recorded as much as they could, then the most important ones were halved, and finally the three most important ones were ranked. After aggregating the associations, it turned out that they were able to associate the most (87) thoughts with happiness and the least (53) with materialism. Compared to the total number of associations, happiness showed the lowest number of different thoughts, so the participants interpreted the concept in a very similar way. The same ratio is the highest for materialism and status symbols, meaning participants have associations that are more diverse. This assumption is reinforced by the fact that the proportion of materialism and status symbol associations with the same meaning occurring more than twice within all associations is the highest.

After narrowing the association set, participants had to select and rank the 3 most important thought associations. From the results obtained in this way, the mind map of Figure 14 is drawn. It can be seen that their conceptions of *money* are about obtaining it, those about *success* are about external reinforcement, and those about *happiness* are about intimate human relationships. Of the *status symbols*, the phone and the house are the most typical, and the *experience* is a vacation and time with friends. Finally, *materialism* means saving money, not spending it for the participants. Associations of *money* can be divided into three categories: acquisition (work, salary), use (purchase, tangible goods) and individual status (success). Since work is very common among both all responses and ranked associations, we can assume that their conceptions of money are dominated primarily by the way it is obtained. Overall, a very low proportion of associations involving spending money were consumption of experiences (e.g., holidays), and tangible goods were more common.

14. Figure: Mindmap of associations



Source: Debreceni & Hofmeister-Tóth, 2020

Although the research provided interesting results and very useful research experience, the qualitative methodology in this area is not necessarily expedient for several reasons. Firstly, the involvement of secondary schools in the selection of the sample, the increase in the number of participants and the management of the research was difficult. Due to the novelty of the topic and the generally reluctant attitude of the schools, it was only possible to interview in an institution where there was a direct or indirect personal contact with researchers. In addition, the school year schedule and timetable made the research difficult, and only available and opened classes could be invited, and students who volunteered for personal and group interviews could be invited. Lastly, it is not possible to filter out the participants' compliance with the interviewer. As it is difficult or extremely expensive to conduct research on this topic in addition to in-depth interviews and focus group tasks (e.g., tracking the spending of real money), another quantitative data collection was conducted in 2019 to finalize the research design of the dissertation.

### 11.3. Results of a quantitative study from 2019: relationships between materialism, values and media use among teenagers

Based on previous research experience, materialism has become necessary to examine the relationship between individual goals, supplemented by voluntary simplicity and a willingness to make sacrifices. In addition to the already known use of social media (U&G), general media preferences were also the subject of the review. The questionnaire, completed by 85 high school students aged 15-20, contained validated attitude scales ranging from 1 to 7 (1 = not true at all or not important; 7 = completely true or very important). Materialism was measured on the 15-item shortened Richins-scale (Richins, 2004), values with the LOV value set, voluntary simplicity with the Shama-Wisenblit scale (Shama & Wisenblit, 1984), and willingness to sacrifice was rated by the implementation of Davis-scale (Davis et al., 2011). The results of the research are published by the Association for Marketing Education and Research XXVI. Conference (Debreceni & Hofmeister-Tóth, 2020).

The significant relationships of the examined variables and their correlations are shown in Table 11. The negative relationship between the *centrality* dimension and the *protection of nature* suggests that possession is at odds with natural concerns. This is reinforced by a strong negative relationship with attitudes towards sacrifice and voluntary simplicity. It can be assumed that the efforts to balance the needs of the community and natural resources is barriered by the individual's desire to own. Since *centrality* is positively related to *self-respect*, renunciation is not merely a renunciation of new goods, but a threat to self-esteem. Some of the mediums are primarily related to the importance of *success*: whereas *print media* interacts negatively, visualization-based *films* and *online news portals* interact positively with the materialism dimension of *success*. It is noteworthy that for those who prefer to communicate with their *family members*, *happiness* does not mean an increase in material wealth, while the use of *online news portals* is associated with a higher material *happiness*.

In addition to the relationships in Table 12, willingness to sacrifice and voluntary simplicity are significantly positively related to three LOV values: the *sense of creation* ( $p < 0.05$ ,  $p < 0.05$ ) and the *protection of nature* ( $p < 0.01$ ,  $p < 0.01$ ), and *safety* ( $p < 0.01$ ,  $p < 0.01$ ). As the *sense of creation* is more about inner personal development, for those who value it, it is presumably easier to give up material goods. Positive and strong relationships with *nature* (correlation coefficient for sacrifice: 0.646; for voluntary simplicity: 0.499) reinforce the assumptions regarding materialism. Furthermore, the relationships of *security* suggest that security means not only security of existence or materials, but also environmental and social security. After all, based on the results, those for whom *security* is more important willing to give up acquiring new goods.

12. Table: Significant correlations from the study

	Success	Acquisition centrality	Happiness
Self-respect		.261*	
Protection of nature		-.328**	
Being well-respected	.220*		
Willingness to sacrifice		-.383**	
Voluntary simplicity		-.591**	
Regular newspaper	-.219*		
Films	.219*		
Family			-.263*
Online news portals	.298**		.224*
Books	-.230*	-.311**	
**significant correlations (Pearson) $p < 0,01$			
*significant correlations (Pearson) $p < 0,05$			
Source: Debreceni & Hofmeister-Tóth, 2020			

Similar to the research in 2017, the U&G scale was included in the comparison after dimension reduction. This time the principal component analysis resulted four well-distinguished factors: *self-extension*, *remembrance*, *observing others*, and *primary functions*. Table 13 shows the statements grouped by the main PCA components.

13. Table: Factor structure of the principal component analysis for U&G-scale

<b>Factor</b>	<b>Items</b>	<b>Loadings</b>
<b>Self-extension</b>	To self-promote	.827
	To become popular	.809
	To depict my life through photos	.727
	To show off my photography skills	.607
<b>Remembrance</b>	To document the world around me	.753
	To remember special events	.655
	To share my life with other people	.649
	To commemorate an event	.645
	To remember something important	.632
<b>Observing others</b>	To see what other people share	.854
	To see “visual status updates” of my friends	.733
	To “like” my followers' photos	.712
	To creep through other people's posts	.641
<b>Primary functions</b>	It is fun	.706
	To interact with my friends	.663
	To provide “visual status updates” for my friends	.568

Source: Debreceni & Hofmeister-Tóth, 2020

Contrary to expectations, U&G factors are related to the few variables examined. Of the materialism dimensions, only success correlated with the memory factor (Pearson: 0.238;  $p < 0.05$ ). Neither the willingness to sacrifice nor the attitude of voluntary simplicity showed a significant relationship. However, there are a number of positive correlations with individual values. The *observing others* factor was related to warm relationships with others (Pearson: 0.227;  $p < 0.05$ ), the *sense of belonging*

(Pearson: 0.246;  $p < 0.05$ ) and *security* (Pearson: 0.232;  $p < 0.05$ ). Unexpectedly, the primary functions of social network sites were positively related to almost every value. The interaction between *enjoyment in life* (Pearson: 0.551;  $p < 0.01$ ), *warm relationships with others* (Pearson: 0.441;  $p < 0.01$ ) and *self-respect* (Pearson: 0.408;  $p < 0.01$ ) were noteworthy. There was a moderate correlation with *self-fulfilment* (Pearson: 0.390;  $p < 0.01$ ) after comparison with the *sense of belonging* (Pearson: 0.365;  $p < 0.01$ ) and *being well-respected* (Pearson: 0.329;  $p < 0.01$ ).

## 12. RESEARCH QUESTIONS AND HYPOTHESES

The research questions and hypotheses of the present dissertation are determined by the review of the literature on materialism, especially adolescent materialism, and the conclusions that can be drawn from our own empirical research. The target group of the research is teenagers completing their high school studies. Among the scientific goals, the primary one is to explore the relationship between adolescents' value preferences and material attitudes. Since adolescence is one of the key stages of consumer socialization, the results can help us to understand what values adolescents see as their own, how they relate to the material and material goods around them, and what strengthens or weakens materialism. Complementing the relationship between materialism and value preferences, the attitude of voluntary simplicity is also expected to answer the question of how open teenagers are to a simpler consumer behaviour. Another scientific goal is to discover the external factors influencing the above system of relationships. A review of the literature evidenced that the antecedents of materialism at a young age and the consequences in adulthood have already been explored. Therefore, the present thesis attempts to include previously or less researched variables in the complex of materialism and personal values. Moreover, the relationship between social media use and materialism and value preferences is less well known. Is there actually a difference between the different social network sites in the above context? Since the school is an important place for adolescents' social relations, together with its spirituality and the goals of secondary school studies, it may be interesting to examine whether there are definite dividing lines between the value

systems and materialism of young people choosing the three different school types. In this context, the focus is not on learning outcomes or cognitive abilities, but on the assumption that teenagers commit to a given type of school based on a medium-long-term life strategy aimed at either establishing an independent material existence as soon as possible, or continuing education, fulfilling as many levels of the education system as possible. In addition to the use of social media and the type of school chosen, another goal is to find out whether the different income, financial situation and purchasing power of the regions where young people live are important in the development of values and materialism.

The practical significance of the research lies in answering the role of tangible goods and consumer goods in the lives of young people who later become consumers with an independent income and the freedom of consumer choice. The connections revealed can help to articulate marketing messages related to goods and services by learning about the value preferences, priorities, and latencies of young consumers. Examining the extent of identification with voluntary simplicity is important because future consumers with a self-sufficient, disposable income and their own household can easily be forced to reduce their own consumer desires due to sustainability concerns, reduced energy consumption, and vulnerabilities in supply chains. Being open at a young age to the “less for more” approach, to small-scale consumer behaviour, can help to promote more conscious, thoughtful and even better consumption. The personal goal of the research is to get to know and understand the importance of adolescence as a significant, transitional period of personality development and socialization.

The objectives are relevant because materialism has not yet been studied in Hungary or in any other country for that matter in this context. The results presented in Chapter 3 suggest that materialism is mostly examined as a variable in different consumer habits, which necessarily narrows the framework for interpreting research findings. Although research on specific consumer habits provides well-explained and particularly pre-expected results, only a few studies have attempted to interpret materialism in a holistic context.

As Chapter 3.6 points out that, the connotation of materialism is often negative, despite the fact that the material goods may serve as a means of coping with the difficulties in a liminal transition period. Therefore, the present dissertation undertakes

to compare the importance of goods with value preferences, especially with regard to the impact of changed and increasingly continuous media use patterns. The aim of the dissertation is not to explore age differences, as the focus of the research is on a well-identifiable group. Nor is it necessary to examine the relationship between materialism and consumer habits, as the target group does not have significant personal income and their spending opportunities are limited. Based on the scientific, practical and personal goals and the knowledge of the materialism literature, the following research questions can be defined:

- 1) *What values relate to materialism? Which values strengthen and which weaken materialism?*
- 2) *What values relate to voluntary simplicity? Which values strengthen and which weaken voluntary simplicity?*
- 3) *What is the relationship between materialism and voluntary simplicity?*
- 4) *Does the motivation for social media use influence the strength of materialism?*
- 5) *What is the relationship between the frequency of use and preferences of different social media networks and materialism?*
- 6) *What is the relationship between school type and materialism?*
- 7) *Is there any difference between teenagers of different school types regarding voluntary simplicity?*
- 8) *Are there differences in terms of values and voluntary simplicity for teenagers living in a different income region?*
- 9) *Is there a difference in terms of materialism between adolescents living in regions with different economic conditions?*

The answers to the research questions are aided by hypotheses that are either supported by research results proven in the literature or, in the absence of a direct history, can be formulated on the basis of the nature of the variables involved in the research. Based on the results of Burrough and Rindfleisch (2002), materialism was negatively related to the collective values of the Schwartz set of values. Also, materialism on the value axis of enhancement-transcendence can be clearly identified with self-enhancement rather than transcendence. Grouzet et al. (2005), who, although not based on the Schwartz set of values, interviewed almost 2,000 students in an international educational setting as to whether financial success was more related to



hedonism and extrinsic goals, reached similar conclusions. Extrinsic goals such as image and popularity have been shown to be at odds with goals such as community, belonging, or self-acceptance. Based on the above and the general results of the value-research, it can be assumed that

**H1:** *Individualistic values (a) and values expressing self-enhancement (b) strengthen material attitudes.*

**H2:** *Collective values (a) and self-transcendence values (b) weaken material attitudes.*

According to the theory of voluntary simplicity, simplification can only take place along internal, personal values, because compliance with appearances and external conditions hinders fulfilment in simplicity. In the classification of needs according to Zavetovski (2002), high-end needs cannot be satisfied with material goods, which can be best identified in the Schwartz circumplex with values expressing self-transcendence and collective values. Therefore, it can be assumed that:

**H3:** *Values for self-transcendence (a) and prosocial values for community well-being (b) have a positive effect on identification with voluntary simplicity.*

A direct study of materialism and voluntary simplicity is not only not one of the mainstreams of consumer research, but recent empirical research has reached opposing conclusions. According to Nepomuceno and Laroche (2015), there is a negative relationship, and according to Kuanr et al. (2020) there is a positive relationship between the two variables. The present dissertation captures the essence of voluntary simplicity in the context that traditional consumption patterns represent an alienation from the goods produced, being not produced by the consumer, so it can be assumed that there is indeed a consumer intent to own fewer material goods, but it is aimed at better appreciating them. Therefore:

**H4:** *Materialism is negatively related to voluntary simplicity.*

If the H4 assumption is still unprovable, and even if the research results show a positive relationship, it may support the preconception that materialism becomes a tool of coping strategy in consumer socialization rather than a parallel simplification.

The preconditions for social media platforms are described in Chapter 3.4. Research on materialism (Lou & Kim, 2019; Islam et al. 2017; Davila et al. 2017) demonstrates that there is a significant positive relationship between materialism and social media use. Although social comparison is not explicitly the subject of this dissertation, social media can be seen as a social arena in which an individual can compare his or her own abilities, achievements, and life situation with others, as Islam and colleagues (2017) confirmed it. Sheldon and Bryant (2016) evidenced that motivations for using social media are significantly positively related to narcissism, which is a distinctly self-centred personality trait. Starting from the relationship system of individualistic Schwartz values proved in the literature (Burrough & Rindfleisch, 2002) it can be assumed that:

**H5:** *Among the motivations for social media use, self-extension (a) and observation of others (b) have a positive effect on materialism.*

**H6:** *The frequency of visual social media use is positively correlated with materialism.*

Although the results of the literature so far do not support it, based on the features of the Hungarian school system presented in Chapter 8, it can be assumed that:

**H7:** *Students in general secondary education are less material compared to students in secondary vocational (a) and vocational education (b).*

**H8:** *Voluntary simplicity is more important for students in general secondary education, than students in secondary vocational (a) or vocational education (b).*

Based on the regional income differences of the Hungarian population (Chapter 9) and the proven correlations of materialism with the financial situation (Górnik-Durose & Pyszkowska, 2020, Ozgen & Esyok, 2020, Li et al. 2018, Zawadska et al. 2018) it can be assumed:

**H9:** *Young people living in regions with better economic conditions are less material than those living in regions with worse economic conditions.*

**H10:** *Young people living in regions with better economic conditions are less likely to identify with voluntary simplicity than those living in regions with worse economic conditions.*

## **12.1. Scaled applied in national sampling**

### *12.1.1. Materialism*

The scale developed by Richins and Dawson (1992) (RVS) examines materialism through three dimensions: *centrality*, *success*, and *happiness*. Since its publication, the scale has quickly become popular in academic and marketing research. The scale originally contained 18 statements, but Richins also developed the shortened version of it with 15, 9, 6 and only 3 statements (Richins, 2004). Although, over time, newer measurement tools have emerged (Kasser & Ryan; Goldberg; Bottomley; Manchanda), which were primarily aimed at meeting specific target groups or data collection conditions, when it comes to quantitative materialism research, the Richins-Dawson or abbreviated Richins scale is primarily used. The national data collection included the full RVS with 18 statements (Appendix 1).

### *12.1.2. Values*

The questionnaire used for data collection contained 21 statements from the Schwartz set of values (Appendix 2). Two statements denote one value, except for universalism, which is denoted by three statements. In doing so, the measurement tools had to take into account the characteristics of the target group (adolescents) and the total number of statements in the questionnaire. This is because each item originally consists of two sentences, which together express the given value. However, Kapitány and Kapitány (2012) have already noted that not only are the contradictions between two sentences belonging to a given value, but in some cases the two sentences refer to two completely different personal characteristics. Therefore, the interviewer cannot be sure that the respondent will take the first or second, or perhaps the most appropriate, both sentences into account when selecting the answer option. Considering that the full questionnaire contained 63 statements to rate, in addition to 4 closed-ended questions (demographic, settlement, school type and grade), finally respondents only had to evaluate the first sentence of each Schwartz statement.

Although the procedure is methodologically risky, statements that have more or less meaning can explicitly confuse teenagers due to their age specificities. Thus, it is clearer for the target group, and the expected time to response was less than 15 minutes.

#### *12.1.3. Voluntary simplicity*

Although Shama and Wisenblit (1984) called the measure they developed the Voluntary Simplicity Value Scale (VS), the scale contains by no means conventional value concepts but statements. As the statements relate to preferences (Appendix 3), it is more appropriate to call them an attitude scale. It is based on five personal qualities, principles through which the authors of the basic works of voluntary simplicity (e.g., Elgin, Mitchell, Leonard-Barton) explained voluntary simplicity: *material simplicity, human scale, self-determination, ecological awareness, and personal inner growth*.

#### *12.1.4. Frequency of use of social media*

The aim of this group of questions was to examine the frequency of use of the most popular social media platforms in Hungary. Based on Figure 9, the research sought answers to criteria related to the use of visual media based on visuality. YouTube, which has the largest user base, is not part of the questionnaire because it is more of a content-focused platform and less person-focused (a significant proportion of users use it under a pseudonym). Pinterest was excluded, because previous research has shown that it is hardly used among antecedents (Debreceni & Hofmeister-Toth, 2018). Finally, the questionnaire panel enquired about four platforms: Instagram, Facebook, Twitter, and TikTok. The frequency of use also consisted of four categories: I am always logged in, a few times a day, at least once a day or I am never logged in (Appendix 4). Based on the responses, social media sites firstly became more rankable and additionally the frequency of use became comparable with other variables.

#### *12.1.5. Motivations for social media use*

The frequency of social media use alone is not a sufficient variable to learn more about the relationship with materialism and values, therefore the motivations of the respondents are also required to be involved. The Uses & Gratifications Scale (hereinafter: U&G), which contains 20 statements, is excellent not only for learning about motivations, but also for factor analysis (Sheldon & Bryant, 2016). The applicability of the U&G scale is influenced by the fact that the statements do not refer at all to the functions of social media sites, preferences between functions (for instance following news), but only to general motivations behind individual fulfilment, the individual's personality.

## 12.2. Research Methodology

Based on the initial research design set up for the dissertation, I expected to investigate the relationship between the variables using one of the most complex methods, PLS-SEM (partial least squares structural equation modelling) modelling. However, with the help of ADANCO software, the indicators of the constructs constructed from the variables, with the exception of Cronbach's alpha, did not meet the methodological recommendations. The average variance extracted (AVE) of the constructs remained under 0.5. There was only one exception: the centrality dimension of the materialism scale. The model measuring the relationship between variables was well above the threshold of SRMR (standardized root mean square residuals). The unweighted least squares discrepancy (dULS) also received a red, i.e., unacceptable colour. The same was true for the geodesic discrepancy (dG), which is another method for quantifying how strongly the empirical correlation matrix differs from the correlation matrix of the model used. The smallest possible indicator would indicate a good fit of the theoretical model, but the dG was also in the red colour range due to its high value. Due to the errors in the methodological adequacy of the examined variables, I turned to simpler statistical analysis during the data analysis. Linear correlation calculations between groups of respondents created by the hierarchical cluster analysis of the Schwartz set of values, motivational factors created by the principal component analysis of the U&G scale, the three dimensions of the materialism scale (happiness, success, and acquisition-centricity) and voluntary simplicity were performed. Through statistical analysis, I was able to perform all hypothesis tests and provide reasoned answers to all questions.

### 13. RESEARCH RESULTS OF NATIONAL SAMPLING

In order to explore the relationship between materialism, values and the use of social media and to answer the research questions of the dissertation, a sample with a large number of items and presenting all regions of Hungary was needed. As it can be accessed through secondary education institutions with the slightest research bias without the involvement of a market researcher, the demographics of the population as well as the statistics of the school system were the starting point for planning the data collection. The questionnaire for data collection reached the target group between November 2021 and February 2022 in four waves, in a regional breakdown, by directly contacting the headteacher of the school. The geographical breakdown of Hungary was according to Budapest (1), the county of Pest (2) and 6 economic regions:

- Central Transdanubia = including the counties of Fejér, Komárom-Esztergom, and Veszprém
- Western Transdanubia = including the counties of Győr-Moson-Sopron, Vas, and Zala
- Southern Transdanubia = including the counties of Baranya, Somogy, and Tolna
- Northern Hungary = including the counties of Borsod-Abaúj-Zemplén, Heves, and Nógrád
- Northern Great Plain = including the counties of Hajdú-Bihar, Jász-Nagykun-Szolnok, and Szabolcs-Szatmár-Bereg
- Southern Great Plain = including the counties of Békés, Bács-Kiskun, and Csongrád-Csanád

The brackets contain the number of the region. Table 14 represents the number of contacts addressed in four waves. Out of requests, 23 were supported, and 6 were rejected, meanwhile 177 letters were not answered. Rejection responses typically gave two explanations: the administrative burden on teachers and classes, and the school's involvement in other surveys, research, and projects.

14. Table: Summary of school responsiveness in four waves by regions

Region	23. 11. 2021		10. 01. 2022		17. 01. 2022		01. 02. 2022	
	<i>I.</i>	<i>II.</i>	<i>I.</i>	<i>II.</i>	<i>I.</i>	<i>II.</i>	<i>I.</i>	<i>II.</i>
1	2	2	0	0	2	0	0	0
2	1	1	2	2	4	4	0	7
3	2	5	2	2	4	4	0	0
4	2	9	2	2	4	4	7	7
5	8	2	2	2	3	4	6	6
6	4	4	2	2	2	4	6	6
7	4	5	2	2	3	5	4	4
8	6	3	2	2	4	4	4	6
<b>Total</b>	<b>29</b>	<b>31</b>	<b>14</b>	<b>14</b>	<b>26</b>	<b>29</b>	<b>27</b>	<b>36</b>

I.: General secondary education (gimnázium)  
 II.: Secondary vocational (technikum) or vocational education (szakképző iskola)

Source: own editing

It is likely that more than 80% of the inquiries were not answered for similar reasons, or that they did not reach the head of the schools, and were filtered by a school secretary or remained simply unread. 11% as willingness to respond is not a failure, considering the pandemic crisis in March 2020 and the institutional measures taken to stop the epidemic. It cannot be ignored that since the introduction of measures against coronavirus (March 2020), the possibility of a personal interview, in addition to providing such a wide range of regionalities, has been almost impossible due to the epidemic situation. However, the effectiveness of the online survey is also questionable. Due to remote online education, the screen time, online activity and workload of teachers and students have increased equally and significantly, which does not favor either the willingness to respond or the willingness to forward the questionnaire.



15. Table: The proportion of students (Nation 2019) and the proportion of sample cases (N = 513) by school types and regions

	General secondary		Secondary vocational		Vocational	
	<i>Country 2019</i>	<i>Sample</i>	<i>Country 2019</i>	<i>Sample</i>	<i>Country 2019</i>	<i>Sample</i>
Budapest	29.3%	3.6%	22.4%	5.9%	10.2%	31.1%
Pest	9.9%	0.6%	5.5%	7.1%	7.0%	0.0%
Central Hungary	39.2%	4.2%	27.9%	13%	17.2%	31.1%
Central Transdanubia	9.2%	20.7%	10.4%	16.8%	12.4%	7.5%
Western Transdanubia	8.7%	27.2%	12.2%	5.5%	10.6%	0.0%
Southern Transdanubia	7.9%	19.5%	7.2%	25.2%	12.0%	29.2%
Northern Hungary	10.1%	11.2%	11.5%	0.4%	14.0%	0.0%
Northern Great Plain	13.8%	5.3%	15.7%	17.6%	18.9%	22.6%
Southern Great Plain	11.1%	11.8%	15.2%	21.4%	14.9%	9.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

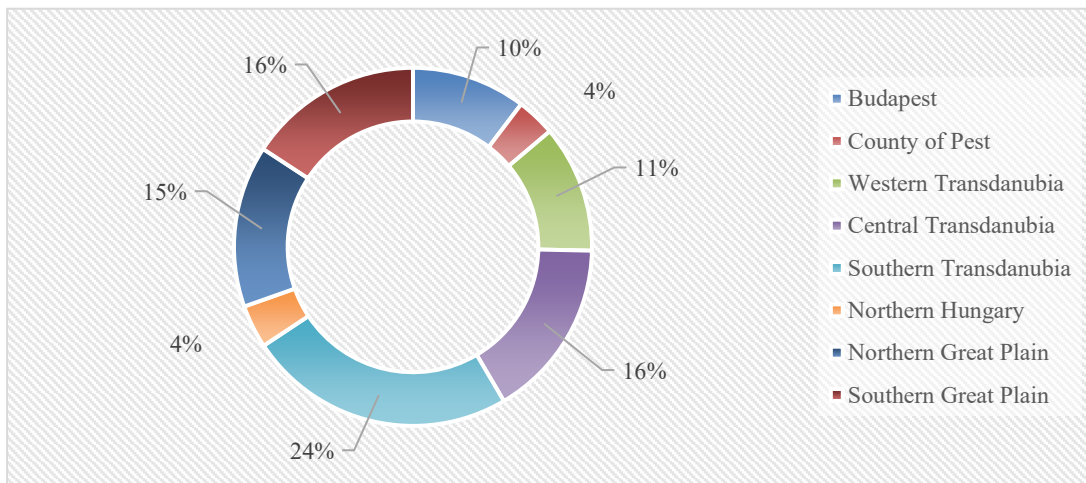
Source: own editing

Comparing the composition of the own sample with the proportions of the total number of secondary school students in Hungary by regional and school type (Table 15), the non-representativeness of the sample with 513 items for either region or school type is confirmed. In spite of non-representativeness, there was no similar national data collection covering all parts of the country on the topic of materialism, values, social media motivation and voluntary simplicity.

### 13.1. Descriptive statistics of the sample

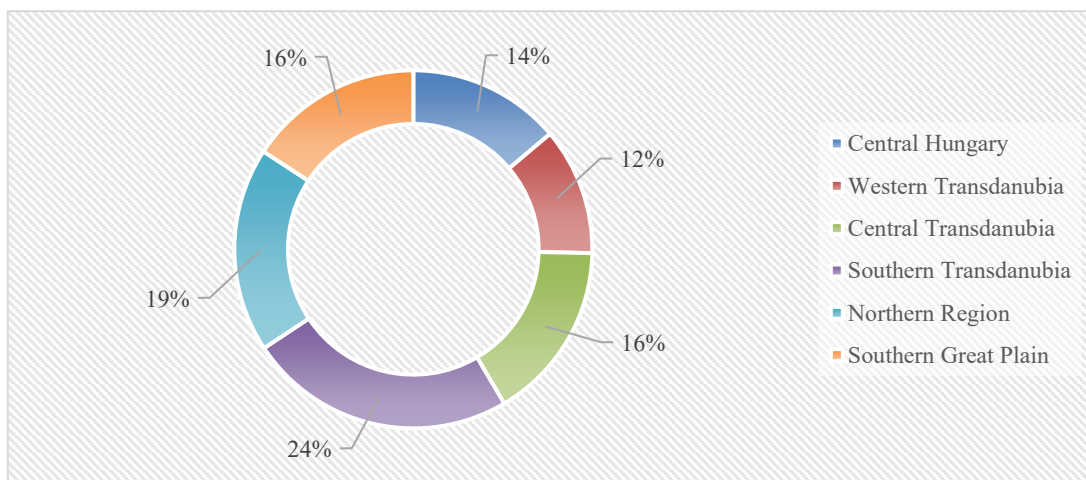
The gender ratio in the sample is relatively balanced, with 57.5% of all respondents female. Regarding school type, vocational institutions are dominant: secondary vocational takes 46.4%, vocational education 20.7% of the sample, while the remaining 32.9% is general secondary education. It can be seen in Figure 15 that the willingness to respond was the highest in the South Transdanubia region and the lowest in the Northern Hungary region. In terms of school grades, 40.7% of respondents are in grade 10, 30% are in grade 11, and 29.2% are in grade 12.

15. Figure: Distribution of respondents by region without aggregation of regions



Source: own editing

16. Figure: Distribution of respondents by region after aggregation of regions



Source: own editing

In order to distribute the sample more evenly, the regions with the lowest response rates were merged with neighboring regions. Accordingly, in the further analysis, the county of Pest together with Budapest forms the Central Hungary region, and Northern Hungary together with the Northern Great Plain forms the Northern Region. Figure 16 illustrates the regional distribution after merging 2 regions.

### 13.2. Statistics of materialism

Richins-Dawson's 18-statement materialism scale can be analyzed in three dimensions: *happiness*, *success* and *centrality*. Materialism scale items are ranked according to mean by dimensions in Table 17. The speciality of the scale is some of the statements are reversed with a meaning contrary to materialism, which are denoted by R in the table. For example, respondents rated from 1 to 7 the statement: “*I wouldn't be any happier if I owned nicer things. (R)*” the same way as “*I'd be happier if I could afford to buy more things.*” statement. However, in the case of a reverse statement, the higher the score (the higher the degree of agreement), the weaker the materialism, so the reverse statements must be recoded before data analysis. Because of the coding, “*I wouldn't be any happier if I owned nicer things.*” the low average of the statement does not mean dissatisfaction with the possessions possessed but on the contrary, satisfaction. The reliability of the scale is demonstrated by a Cronbach's alpha value above 0.7 ( $\alpha = 0.715$ ).

Among the dimensions, *centrality* had the highest mean score (mean = 4.01, standard deviation = 0.908), followed by *happiness* (mean = 3.70, standard deviation = 1.161), while *success* scored the lowest mean (mean = 3.45, standard deviation = 0.979). In all three cases, it is worth noting that the mean value of the statements is 4, so the respondents showed weaker than average materialism in two dimensions, with medium materialism in terms of acquisition-centricity.

16. Table: Richins-Dawson-scale ranking

	<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
HAPPINESS	I like to own things that impress people.	4.12	1.707
	I wouldn't be any happier if I owned nicer things. (R)	4.04	1.916
	I'd be happier if I could afford to buy more things.	3.95	1.916
	My life would be better if I owned certain things I don't have.	3.82	2.070
	I have all the things I really need to enjoy life. (R)	2.59	1.669
SUCCESS	Some of the most important achievements in life include acquiring material possessions.	4.07	1.848
	I admire people who own expensive homes, cars, and clothes.	3.96	1.879
	I don't place much emphasis on the amount of material objects people own as a sign of success. (R)	3.46	2.131
	I don't pay much attention to the material objects other people own. (R)	3.23	1.999
	The things I own say a lot about how well I'm doing in life.	3.04	1.719
	I like to own things that impress people.	3.00	1.655
CENTRALITY	The things I own aren't all that important to me. (R)	5.17	1.761
	Buying things gives me a lot of pleasure.	4.24	1.952
	I like a lot of luxury in my life.	4.15	1.748
	I try to keep my life simple, as far as possessions are concerned. (R)	4.11	1.778
	I put less emphasis on material things than most people I know. (R)	4.00	1.621
	I usually buy only the things I need. (R)	3.26	1.685
	I enjoy spending money on things that aren't practical.	3.17	1.773

Source: own editing

### 13.3. Statistics of voluntary simplicity

Table 17 presents the ranking of voluntary simplicity scale elements according to ranking. There is no reverse statement on this scale, all statements point in the direction of voluntary simplicity. In terms of environmental and social sustainability, it is encouraging that the average score of the respondents is above average, and a statement that favors personal development over material prosperity shows the highest average. Based on basic statistics, the young people interviewed appear to be more open to more conscious, thoughtful, restrained consumer behaviour, but whether this is indeed the case is not clear on the attitude scale. The Cronbach's alpha value for the voluntary simplicity scale is 0.750, which makes the scale reliable.

17. Table: Voluntary simplicity scale ranking

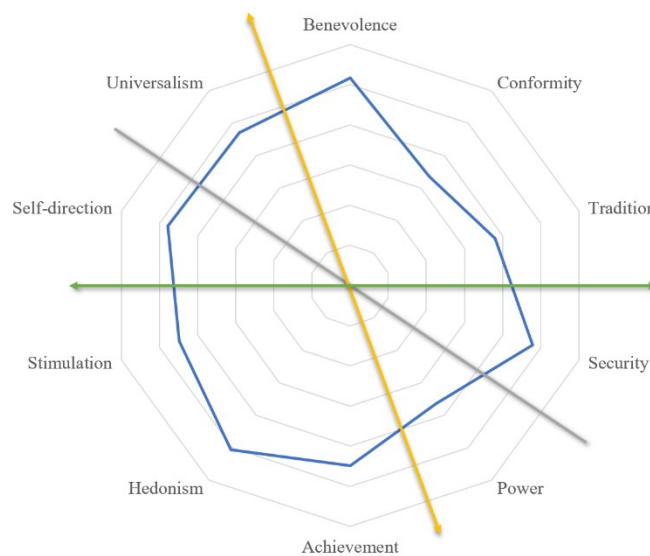
<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
I am interested in personal growth than economic growth.	5.23	1.515
I believe that product function is usually more important than its style.	4.97	1.541
I believe in „small is beautiful” e.g., I prefer smaller cars over large cars.	4.93	1.704
I believe in material simplicity, i.e., buying and consuming only what I need.	4.50	1.734
I am determined to have more control over my life as a consumer, e.g., stay away from instalment buying.	4.50	1.641
I consider myself ecologically responsible.	4.43	1.555
<b>Voluntary simplicity main average</b>	<b>4.76</b>	<b>1.078</b>

Source: own editing

### 13.4. Statistics of Schwartz-value set

The statements in the Schwartz value set are summarized in Table 17, categorized by the ten values. For young people, the most important value is *benevolence*, which in Schwartz's value model is a collective value of self-transcendence. As the relationship with friends and the social environment is especially important in adolescence, it is not surprising that it is the highest average score. Similarly, the individualistic value, *hedonism* for experiencing pleasures, as well as individualistic *self-direction*, fit well into the attitudes of the target group studied. In the case of value tests, in addition to the most important values, it is worth paying emphasis to the rejected statements. *Conformity* and *tradition* form the set of collective values, while *tradition* can also be considered as part of the conservation value set. The Schwartz-circumplex illustrates (Figure 17) well the differences between opposite values: *benevolence-power*, *self-direction-tradition*, and *hedonism-conformity*. We see particularly youthful preferences typical of adolescents.

17. Figure: Schwartz-circumplex of the national sample



Source: own editing

Examining the 21 statements individually, it can be concluded, that **benevolence** (*It is important for him to be loyal to his friends.*) and **hedonism** (*Having a good time is important to him.*) values show the highest scores. The second most important is the **security** (*It is important for him to live in secure surroundings.*); the third is **self-direction** (*It is important for him to make his own decisions about what he does.*). The most rejected statement was for **conformity** value (*He believes that people should do what they're told.*) followed by **power** (*It is important for him to be in charge and tell others what to do.*) and **tradition** (*Religious belief is important to him.*).

18. Table: Schwartz-value ranking according to mean

	Mean	Standard deviation
<b>Benevolence mean (collective-self-transcendence)</b>	<b>5.17</b>	<b>.940</b>
It is important for him to be loyal to his friends.	5.44	.991
It's very important for him to help the people around him.	4.89	1.204
<b>Hedonism mean (individual)</b>	<b>5.05</b>	<b>.963</b>
Having a good time is important to him.	5.44	.996
He seeks every chance he can to have fun.	4.65	1.270
<b>Self-direction mean (individual-openness to change)</b>	<b>4.79</b>	<b>1.020</b>
It is important for him to make his own decisions about what he does.	5.16	1.132
Thinking up new ideas and being creative is important for him.	4.42	1.376
<b>Security mean (collective-conservativist)</b>	<b>4.79</b>	<b>1.027</b>
It is important for him to live in secure surroundings.	5.41	1.053
It is very important for him that his country be safe from threats from within and without.	4.18	1.479
<b>Universalism mean (collective-self-transcendence)</b>	<b>4.71</b>	<b>1.019</b>
He strongly believes that people should care for nature.	4.85	1.260
He thinks it is important that every person in the world be treated equally.	4.73	1.482
It is important for him to listen to people who are different from him.	4.54	1.350
<b>Achievement mean (individual-self-enhancement)</b>	<b>4.61</b>	<b>1.043</b>
It is very important for him to show his abilities.	4.74	1.272
Being very successful is important to him.	4.49	1.302
<b>Stimulation mean (individual-openness to change)</b>	<b>4.49</b>	<b>1.203</b>
He likes surprises and is always looking for new things to do.	4.71	1.313
He looks for adventures and likes to take risks.	4.27	1.481
<b>Tradition mean (collective-conservativist)</b>	<b>3.80</b>	<b>1.091</b>
He thinks it's important not to ask for more than what you have.	4.04	1.471
Religious belief is important for him.	3.57	1.476
<b>Power mean (individual-self-enhancement)</b>	<b>3.64</b>	<b>1.202</b>
It is important for him to be rich.	3.76	1.509
It is important for him to be in charge and tell others what to do.	3.53	1.474
<b>Conformity mean (collective)</b>	<b>3.36</b>	<b>.914</b>
It is important for him always to behave properly.	4.58	1.293
He believes that people should do what they're told.	2.14	1.292

Source: own editing

To identify attitudes and to explore the relationship between attitudes, cluster analysis is often used for the Schwartz-value set. A non-hierarchical K-mean cluster analysis was carried out for the two dimensions of the Schwartz-value sets: **individualistic** (*self-direction, stimulation, hedonism, achievement, power*) and **collective** (*universalism, benevolence, conformity, tradition, security*). Preliminary cluster analyses have shown that it is worth grouping cases with 3-3 clusters per value dimension. More than three clusters would make the cluster structure difficult to interpret and two clusters would make the cluster structure too simplistic. The values that make up the clusters, together with their final cluster center and the number of clusters, are shown in Table 19.

In the dimension of **individualistic** values, the clusters of the respondents are best characterized by the label of *leader, follower, and restrained*. Compared to the other clusters, all individual values are more important for the *leaders*, but *power* shows the biggest difference, which is much higher than the sample average. *Followers* also have individual values around or above the sample mean; however, the value of *power* remains well below the sample mean. This is the reason for their label of *follower*. Although they are similar to the leading personalities of their motivations, control over others and leadership are not important to them. *Restrained* people showed preferences under sample scores for all values.

Clusters based on **collective** values resulted in clusters with the labels: *idealist, conformist, individualistic*. *Idealists* show above-average preference for all values, and their name is justified by the importance of benevolence, tradition, security, and universalism far above the sample average. The cluster centers of the *conformist* reflect the sample average the most, so they are the respondents who are most able to identify with the collective values. Lastly, for *individualistic*, community values are the least important, not only the lowest average conformity, but also the well-below-average benevolence suggests that they are on their own path and do not particularly care about the well-being of others.



19. Table: Schwartz-value clusters

<b>Individualistic values</b>	<b>Clusters with cluster centres</b>			<b>Sample mean</b>
	<i>Restrained</i>	<i>Leader</i>	<i>Follower</i>	
Self-direction	3.66	5.23	5.01	4.79
Power	3.23	4.57	2.81	3.64
Achievement	3.61	5.36	4.39	4.61
Stimulation	3.29	5.08	4.58	4.49
Hedonism	3.92	5.44	5.32	5.05
Number of cases	n = 119	n = 214	n = 180	N = 513

<b>Collective values</b>	<b>Clusters with cluster centres</b>			<b>Sample mean</b>
	<i>Conformist</i>	<i>Individualistic</i>	<i>Idealist</i>	
Universalism	4.41	3.05	5.29	4.71
Security	4.66	3.27	5.22	4.79
Conformity	3.02	2.88	3.71	3.36
Tradition	3.07	2.99	4.52	3.80
Benevolence	5.15	3.32	5.58	5.17
Number of cases	n = 194	n = 57	n = 262	N = 513

Source: own editing

The significance of both cluster structures is confirmed by the cross-tabulation analysis of clusters, the results of which are summarized in Table 20. Pearson's Chi-square test of the cross-tab indicates a significant relationship between the variables (Pearson = 106.126,  $p < 0.001$ ). One of the curiosities of the cross-tabulation is that the *restrained* and *conformist* clusters are almost evenly distributed across different clusters, which reinforces the middle path features of the *restrained* and *conformist* clusters. Furthermore, one half of the *followers* belong to the *conformists*, which reinforces the assumption that they are more in line with the norms set by the others, but the other half is intersected with a group of *idealists*, which may be explained by movement with *leaders*. The most interesting relationship is the intersection of the *leaders* and the *idealists*, as both clusters are the clusters with the highest value preference in their own value dimension. This result is strange, because we expected *leaders* to be among the *individualistic cluster* with low **collective** value preferences. The development of the results can be explained by the characteristics of the respondents' life stage: adolescence. During the liminal transition of adolescence, the individual wants to fulfil his own desires and personal goals (**individualistic** values) at all costs while being a respected member of the community (**collective** values).

As this dichotomy in adolescence is not entirely clear, and the adolescent and his social environment are typically unaware, this dichotomy is usually the source of many personal conflicts.

20. Table: Crosstabulation of individualistic and collective value clusters

<b>Clusters</b>	<i>Restrained</i>	<i>Leader</i>	<i>Follower</i>	<i>Total</i>
<i>Conformist</i>	42	74	78	194
<i>Individualistic</i>	43	9	5	57
<i>Idealist</i>	34	131	97	262
<i>Total</i>	119	214	180	513

Source: own editing

**13.5. Statistics of social media use**

The frequency of use of social network sites is summarized in Table 21, and the results provide many interesting lessons. Firstly, they confirm the low reach and embeddedness of Twitter in the teenager group; in line with the low global reach (Chapter 7), the platform is not very popular among Hungarian users either. However, it is important to note that the poll was completed before the outbreak of the Russian-Ukrainian War on February 24, 2022. Since people on the front lines and stuck in war zones broadcast their experiences on Twitter and Telegram, it may affect the willingness to use the platform. However, media market information on this is not yet available at the time of writing this dissertation.

The case of Facebook is special in the studied age group, as the world's leading social portal is becoming less and less popular among young people according to the trends presented in Chapter 7. This is evidenced by the results of the present research, with Facebook remaining in the response category for infrequent and weekly use. The result is also thought provoking because the creation of your own Facebook profile is allowed from the age of 13, and the respondents are between the ages of 15 and 19, meaning they are at a stage in their lives where they could find it popular. As only 40% of those, surveyed use Facebook on a daily basis, its dominance in the growing age group surveyed may be doubtful in the future. Of course, this assumption is only true for Facebook's traditional social media platform; new interfaces such as Meta and specific services such as Marketplace are not part of the present study, and the research

did not cover the use of Messenger, which is presumably dominant in its own market. According to online media statistics in Hungary (Figure 9) it is likely that a respondent who never claims to have used Facebook uses Messenger on a daily basis, because the number of Messenger users is approaching 5 million.

The change in preferences is well reflected in the frequency of daily use of TikTok. Although the amount of TikTok responses is slightly higher than that of Facebook, a social portal launched in Hungary less than four years ago is a significant achievement compared Facebook with its 14-year presence. Interpreting TikTok preferences with Instagram responses confirms the dominance of the visual media experience based on visuality. Although Instagram is a platform that has long been embedded in the public consciousness, the sum of weekly and daily frequencies does not yet exceed that of Facebook.

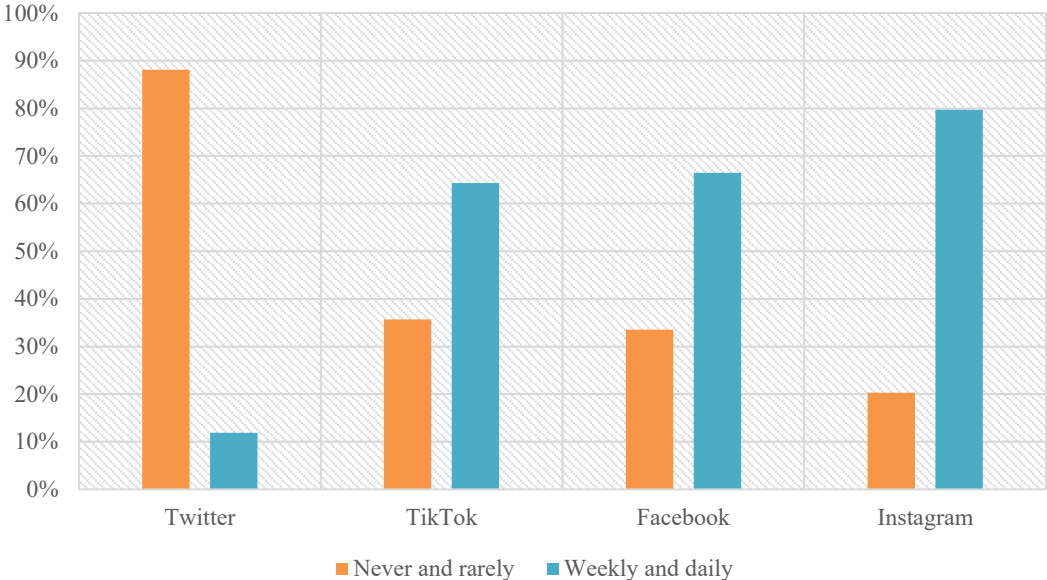
21. Table: Frequency of social media use

	<b>Twitter</b>	<b>TikTok</b>	<b>Instagram</b>	<b>Facebook</b>
<i>Never</i>	374	136	51	30
Proportion	72.9%	26.5%	9.9%	5.8%
<i>Very rarely</i>	78	47	53	142
Proportion	15.2%	9.2%	10.3%	27.7%
<i>Weekly</i>	28	124	159	140
Proportion	5.5%	24.2%	31.0%	27.3%
<i>Daily</i>	33	206	201	250
Proportion	6.4%	40.2%	48.7%	39.2%
<i>Total</i>	513	513	513	513
Proportion	100%	100%	100%	100%

Source: own editing

The frequency of use of social network sites should be divided into two groups: *never and rarely* (infrequent), and *weekly and daily* (frequent). Figure 18 shows the distribution of responses between the two frequency groups in the proportion of total responses (N = 513). The bar charts confirm the assumption that TikTok has caught up with Facebook in the age group studied. The development of infrequent or frequent use of the two platforms is almost the same.

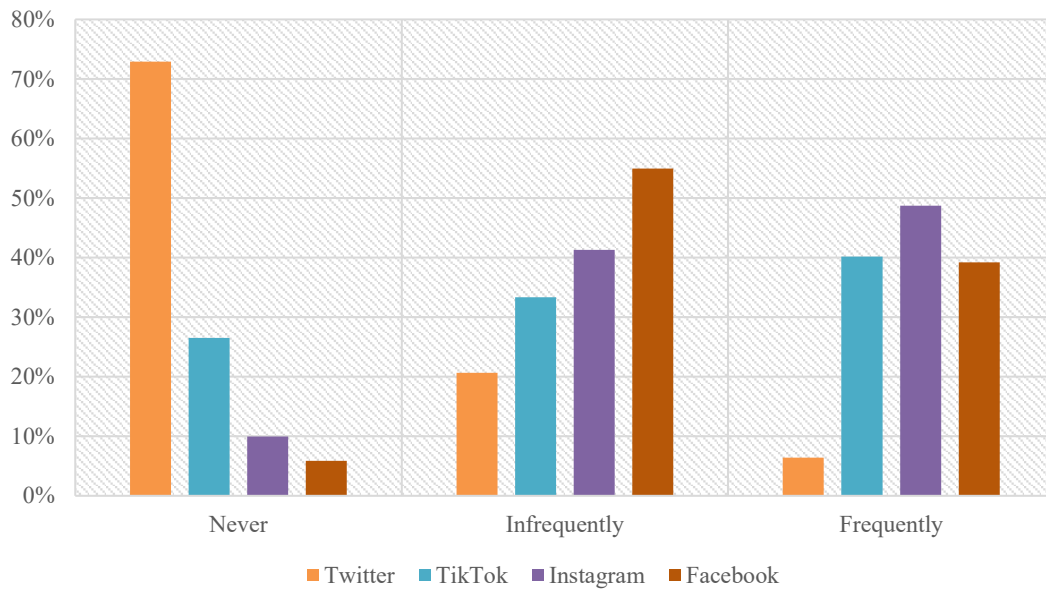
18. Figure: Infrequent (never/rarely) and frequent (weekly/daily) use of social network sites



Source: own editing

It is even clearer from the bar chart in Figure 19 that TikTok is gaining ground over Facebook. The chart distinguishes three-frequency groups: *never*, *infrequently*, or *often* (by aggregating weekly and daily frequency). In the common response category, TikTok is just ahead of Facebook, while the intensity of Instagram use is significant.

19. Figure: Frequency of use of social sites by three-frequency category



Source: own editing

### 13.6. Statistics of Uses & Gratifications-scale

Table 22 summarizes the ranking of U&G-scale statements according to mean. The question was “How strongly do you feel the following motivations when using social media (Facebook, Instagram, Tiktok, etc.)?” The most typical motivation, *to connect with my friends*, stands out from the list, and *to follow my friends*, along with the statement, reinforces the importance of the original goals of social portals - keeping in touch, building community. It is an interesting result that based on their self-esteem, the respondents are the least characterized by *popularity* and *self-promotion*. All this is surprising because taking a look at the timeline of almost any social portal, ever newer personal content, life images, snapshots and current personal experiences are shared every second. There are two possible explanations for the lowest average mean scores for self-promotion and popularity: firstly, it is not certain that one's own post with one's own content (e.g., photo, selfie, mood, etc.) is interpreted as self-promotion, which is a relevant suggestion, as popularity has become a separate scene in social media today due to influencers. Secondly, statements such as “to see what other people share” or “to see “visual status updates” of my friends” are above the mean (4) in the upper house of the rankings, meaning that a passive, observer role is usually closer to self-directed content creation and “domination” of the timeline.

22. Table: Uses & Gratifications item rankings

<b>How strongly do you feel the following motivations when using social media (Facebook, Instagram, Tiktok, etc.)?</b>	<b>Mean</b>	<b>Standard deviation</b>
to interact with my friends	5.75	1.488
to follow my friends	4.88	1.757
it is fun	4.86	1.747
to remember special events	4.30	1.916
to see what other people share	4.16	1.768
to see “visual status updates” of my friends	4.10	1.826
to creep through other people's posts	3.98	1.820
to find people with whom I have common interests	3.92	1.984
to remember something important	3.85	2.059
to commemorate an event	3.42	1.937
to “like” my followers' photos	3.04	1.890
to create an art	2.84	1.956
to document the world around me	2.78	1.786
to show off my photography skills	2.69	1.911
to depict my life through photos	2.69	1.850
to provide “visual status updates” for my friends	2.68	1.788
to share my life with other people	2.60	1.737
it is cool	2.57	1.869
to become popular	2.29	1.745
to self-promote	2.20	1.690

Source: own editing

The 20 statements on the U&G scale are particularly suitable for factor analysis. After a preliminary run of the principal component analysis, three statements showed such a low loading that they had to be excluded from the final analysis. The items excluded from the principal component analysis were: “*to interact with my friends*”, “*to “like” my followers' photos*”, and “*to find people with whom I have common interests*”. The U&G-scale, abbreviated to 17 statements, fully meets the requirements of factor analysis: the correlations of the variable pairs, the thumb rule of the anti-image covariance matrix and the correlation matrix, the Kaiser-Meyer-Olkin criterion, and the Bartlett. test (Sajtos & Mitev, 2007). Each of the 136 variable pairs is significantly correlated. Exactly 25% of the elements outside the main diagonal of the anti-image covariance matrix are greater than 0.09, and the values of the elements of the anti-image correlation matrix ranged from 0.847 to 0.954. The Kaiser-Meyer-Olkin is 0.902, which means that the variables are excellent for factor analysis, which is also confirmed by the Bartlett test ( $p = 0.000$ ). A three-factor structure run by the principal component analysis (PCA) method and rotated by the Varimax method proved to be the most appropriate for further studies by running the cases multiple times and taking

into account the meaning of the statements. The variance explained by the factor structure is summarized in Table 23. Based on the aggregate variance ratio indicator, it can be seen that the three components (factors) explain 64% of the total variance of the sample, which can be said to be adequate.

23. Table: U&G-scale principal component analysis results

<b>Initial Eigenvalues</b>	<b>Component 1</b>	<b>Component 2</b>	<b>Component 3</b>
Eigenvalue	7.593	1.811	1.484
% of Variance	44.666	10.651	8.727
Cumulitve variance %	44.666	55.316	64.044
<b>Extraction Sums of Squared Loadings</b>	<b>Component 1</b>	<b>Component 2</b>	<b>Component 3</b>
Eigenvalue	7.593	1.811	1.484
% of Variance	44.666	10.651	8.727
Cumulitve variance %	44.666	55.316	64.044
<b>Rotation Sums of Squared Loadings</b>	<b>Component 1</b>	<b>Component 2</b>	<b>Component 3</b>
Eigenvalue	4.841	3.354	2.692
% of Variance	28.477	19.732	15.834
Cumulitve variance %	28.477	48.209	64.044

Source: own editing

Table 24 summarizes the composition of the factors in descending order of factor loadings. A similar structure was obtained by the 2017 historical research (see Chapter 8.1), with the difference being that the 2017 sample was made up of a five-factor structure: *creativity and self-extension*, *surveillance and knowledge about others*, *coolness*, *remembrance*, and *friendship*. The remembrance factor was not included in Chapter 8.1, because none of its correlation coefficients was significant at that time. The values in the communality column show the proportion of all factors that explain the variance of a given variable. Because all variables have a value greater than 0.25, they have sufficient explanatory power. Factor loadings quantify the role of a given variable in its own component, the higher the value of the factor weight, the more important the given variable is for the interpretation of the factor.

24. Table: Summary table of U&G-scale factors

U&G-scale item	Loadings			Communalities
	<i>Self-extension</i>	<i>Observing other</i>	<i>Remembrance</i>	
to self-promote	<b>.867</b>			.788
to become popular	<b>.837</b>			.747
to share my life with other people	<b>.704</b>			.667
to provide „visual updates” for my friends	<b>.703</b>			.677
to depict my life through photos	<b>.698</b>			.640
it is cool	<b>.661</b>			.588
to document the world around me	<b>.651</b>			.595
to show off my photography skills	<b>.619</b>			.521
to create art	<b>.554</b>			.412
to see what other people share		<b>.812</b>		.716
to see „visual status updates” of my friends		<b>.738</b>		.634
to follow my friends		<b>.751</b>		.647
to creep through other people’s posts		<b>.652</b>		.480
it is fun		<b>.651</b>		.482
to remember something important			<b>.830</b>	.791
to remember special events			<b>.804</b>	.744
to commemorate an event			<b>.786</b>	.760

Source: own editing

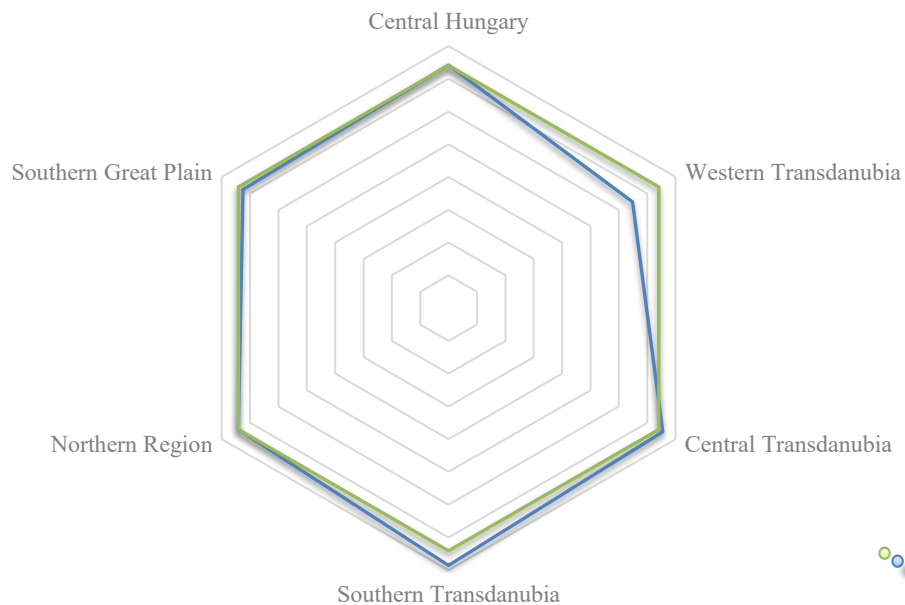


### 13.7. Examination of the relationships of materialism

The dimension means of the materialism scale for *happiness*, *success*, and *centrality* show a remarkable difference in grouping by gender, region, school type, and class. In gender grouping, the Kolmogorov – Smirnov and Shapiro – Wilk tests confirm that the values have a normal distribution for all three dimensions of materialism. Therefore, comparison of means can be performed by analysis of variance (ANOVA). However, based on the results of the ANOVA, only the dimensional mean of happiness differs significantly ( $F = 5.242$ ,  $p = 0.022$ ), tangible assets contribute less ( $n = 295$ , mean = 3,604) to women's feelings of happiness than to men ( $n = 218$ , mean = 3,840).

The normality test of grouping by regions is not significant for any of the materialism dimensions, i.e., the three averages follow a normal distribution in each region. However, according to the ANOVA test results, only the mean of *happiness* differs significantly from the dimensions ( $F = 2.999$ ,  $p = 0.011$ ). The differences by region are shown in the radar chart in Figure 20, with the total sample mean in green (N = 513) and the average by region in blue.

20. Figure: The differences of the means of the **happiness** by region

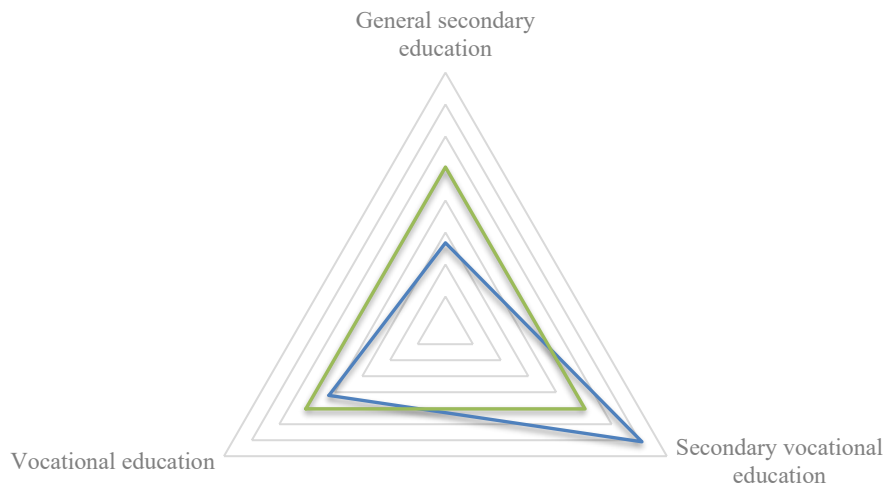


Source: own editing

It can be said that four of the six regions represent the sample mean and only two regions differ from it. In Southern Transdanubia, material goods contribute to the respondents' sense of happiness rather more, in Western Transdanubia it is the contrary. Apart from these two differences, young people living in different parts of the country can be considered homogeneous in terms of materialism.

When grouped by school types, normality tests are significant for half of the variable pairs, thus they do not prove beyond any doubt the normal distribution of the values of the materialism dimensions. However, the non-parametric Kruskal – Wallis test, similarly to the analysis by gender and region, showed a significant difference only in the happiness dimension (test statistic = 14.378,  $p < 0.001$ ).

21. Figure: The difference of means of **happiness** by school type

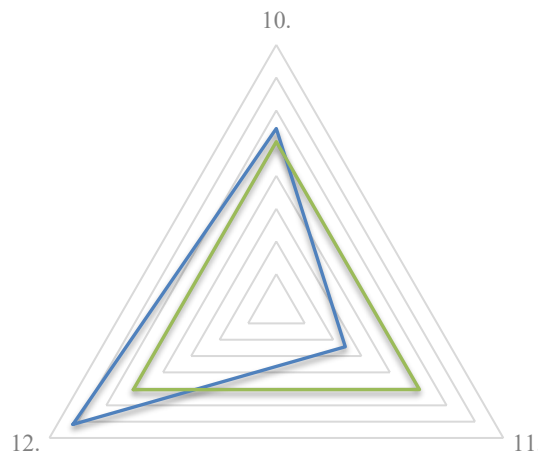


Source: own editing

The radar chart of Figure 21 (green shows the total sample average, blue shows the average per school type) shows that the contribution of material goods to the feeling of happiness. The mean is the lowest in the case of general secondary education (mean = 3.467, standard deviation = 1.145), slightly higher in secondary vocational education (mean = 3.621, standard deviation = 1.161), but still below the sample average (mean = 3.705, standard deviation = 1.160), finally, significantly higher in vocational education (mean = 3.910, standard deviation = 1.139).

Significant differences in the average of general secondary students confirm the assumption (H7a and H7b) that material goods are less important to them compared to other types of schools. Normality tests do not confirm the normal distribution of the value of the materialism dimensions in the grouping according to grade (10, 11 and 12); therefore, the significance of the differences was proved by non-parametric tests. Of the three dimensions, the differences between happiness (test statistic = 12.896,  $p = 0.002$ ) and material success (test statistic = 9.677,  $p = 0.008$ ) are significant.

22. Figure: The difference of means of **happiness** by school grades

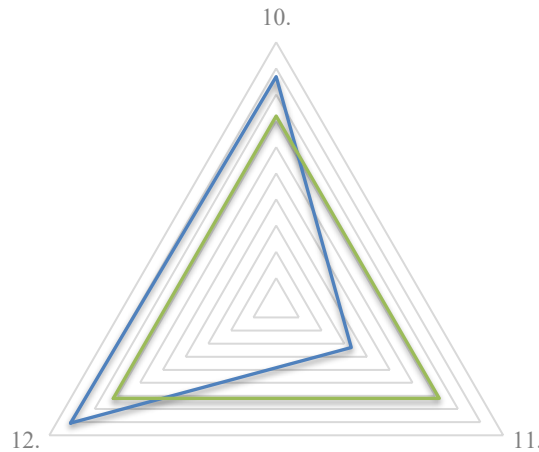


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Figure 22 shows in green the total sample mean ( $N = 513$ ) of the happiness dimension, and in blue the average by grade. Two grades show significant differences, while in grade 11 (mean = 3.433, standard deviation = 1.066) the contribution of tangible assets to the feeling of happiness falls below the sample mean (mean = 3.705, standard deviation = 1.202), and then grade 12 (mean = 3.913, standard deviation = 1.151) rises well above the sample mean. The radar chart in Figure 23 shows the means of financial success in each grade (blue) relative to the overall sample mean (green). The differences of the means confirm a pattern similar to happiness, even if these differences in success are smaller than to those of happiness. While in grade 11 (mean = 3.534, standard deviation = 0.968) the role of tangible assets in the meaning of

success falls below the sample mean (mean = 3.460, standard deviation = 0.980), then in grade 12 (mean = 3.533, standard deviation = 0.960) rises above the sample mean.

23. Figure: The differences of the means of the **success** by grade

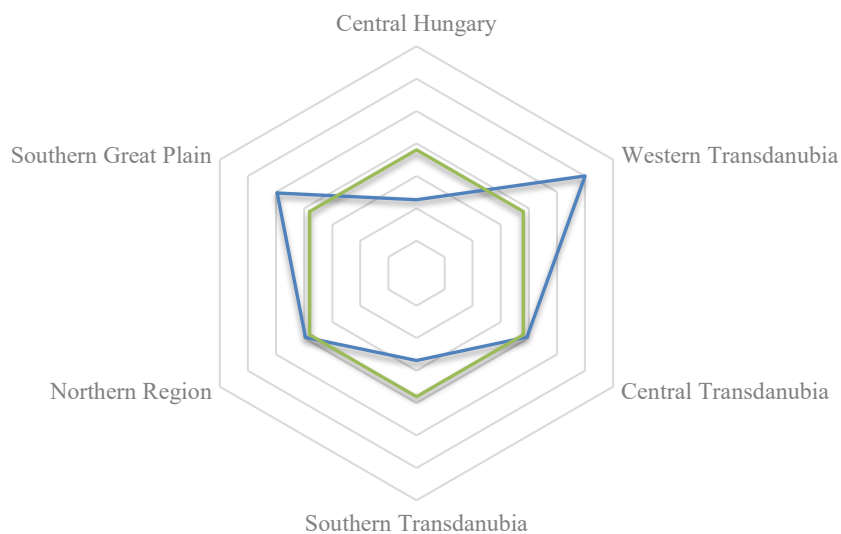


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### 13.8. Examination of the relationships of voluntary simplicity

Mean differences of voluntary simplicity in gender categories are not significant. The main average by regions does not follow a normal distribution, therefore - similarly to the previous tests - non-parametric tests prove the significance of the differences between the six regions (test statistics = 25.693,  $p < 0.001$ ).

24. Figure: The difference of means of voluntary simplicity by regions



Source: own editing

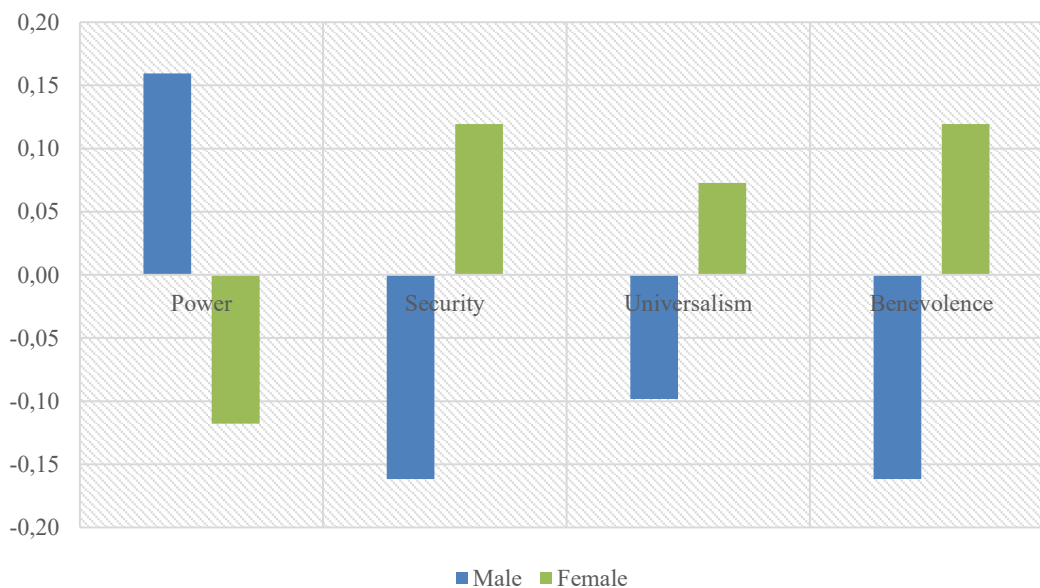
The means by regions do not follow a normal distribution, therefore - similarly to the previous ones - non-parametric tests prove the significance of the differences between the six regions (test statistics = 25.693,  $p < 0.001$ ). In Figure 24, the regional mean (blue) differs from the sample mean (green) in several cases. The attitudes of the respondents from Central Hungary (mean = 4.453, standard deviation = 1.143) and Southern Transdanubia (mean = 4.538, standard deviation = 1.069) to voluntary simplification were slightly below the sample average (mean = 4.760, standard deviation = 1.078). In contrast, the respondents from the Southern Great Plain region (mean = 4.992, standard deviation = 0.938) show a slightly above-sample voluntary simplicity, while those from Western Transdanubia show a much higher (average = 5.200, standard deviation = 0.966) voluntary simplicity. Thus, Hypothesis H10 is only partially true, because in the Central Hungary region with the best income prospects, the attitude indicating voluntary simplification is indeed lower, while in the second wealthiest Western Transdanubia, the opposite is true. The result of the latter is very close to the principle of voluntary simplification, according to which real and deeply rooted simplification is characterized by intentional renunciation, i.e. small-scale consumption must take place by internal decision and not by financial-economic coercion.

Voluntary simplicity is not normally distributed by either school type or grade. However, the Kruskal - Wallis test supports the significance of the differences for both school types (test statistic = 10.836,  $p = 0.004$ ) and grades (test statistic = 7.741,  $p = 0.021$ ). In general secondary education, (mean = 4.924, standard deviation = 0.940) the level of voluntary simplicity was above the sample average (mean = 4.761, standard deviation = 1.078), in secondary vocational education it accurately reflects the sample average, while in vocational education it was below the sample average (mean = 4.494, standard deviation = 1.234). The results confirm the hypothesis of hypothesis H8, i.e. grammar school students identify better with voluntary simplicity compared to students in secondary vocational (H8a) and vocational education (H8b). In addition, there are much smaller differences between grades: in grade 10 (mean = 4.560, standard deviation = 1.175) below the sample mean (mean = 4.761, standard deviation = 1.078), in grade 11 is above the sample mean, and in grade 12 it is exactly around the sample mean.

### 13.9. Examination of the Schwartz-value set

As in previous chapters, the normal distribution of responses had to be ascertained before confirming the difference between the ten values investigated in the research. The Kolmogorov – Smirnov and Shapiro – Wilk tests did not indicate a normal distribution in this case. Therefore, non-parametric tests demonstrated significant differences for four values: *power* (test statistic = 5.511,  $p = 0.019$ ), *security* (test statistic = 5.887,  $p = 0.015$ ), *universalism* (test statistic = 6.938,  $p = 0.008$ ), and *benevolence* (test statistic = 12.635,  $p < 0.001$ ). Figure 25 illustrates the difference between the group means of the individual values and the sample mean. It is clear that male (blue) respondents present a higher value in terms of *power* and a lower value than the sample average for all other values. Based on the correlation tests and previous cluster analysis (Chapter 10.1.3.), it can be concluded that **collective** values (*security*, *universalism*, and *benevolence*) are more important to women (green), while women and men differ from **individualistic** values only in the importance of *power*. In addition, women prefer more than men *universalism* and *benevolence* which play a role in **self-transcendence** in the development of the current self-state. At the same time, men consider *security* much less important and the *power* to **self-enhancement** is much more important than women do.

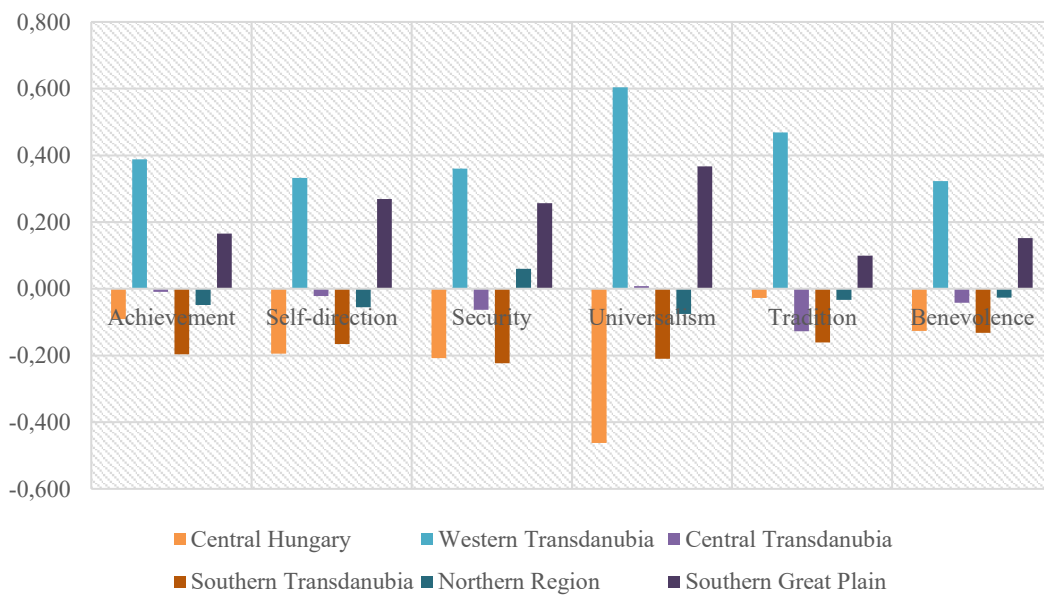
25. Figure: Schwartz-value differences by gender



Source: own editing

Schwartz values do not follow a normal distribution by region; therefore, non-parametric tests can be used to check for differences between countries. Six of the ten values show significant differences: *self-direction* (test statistic = 16.523,  $p = 0.005$ ), *universalism* (test statistic = 53.576,  $p < 0.001$ ), *achievement* (test statistic = 13.485,  $p = 0.019$ ), *security* (test statistic = 21.858,  $p < 0.001$ ), *tradition* (test statistic = 17.078,  $p = 0.004$ ) and *benevolence* (test statistic = 14.572,  $p = 0.012$ ). The distance of the six values from the sample mean are shown in Figure 26.

26. Figure: Regional differences of Schwartz-values

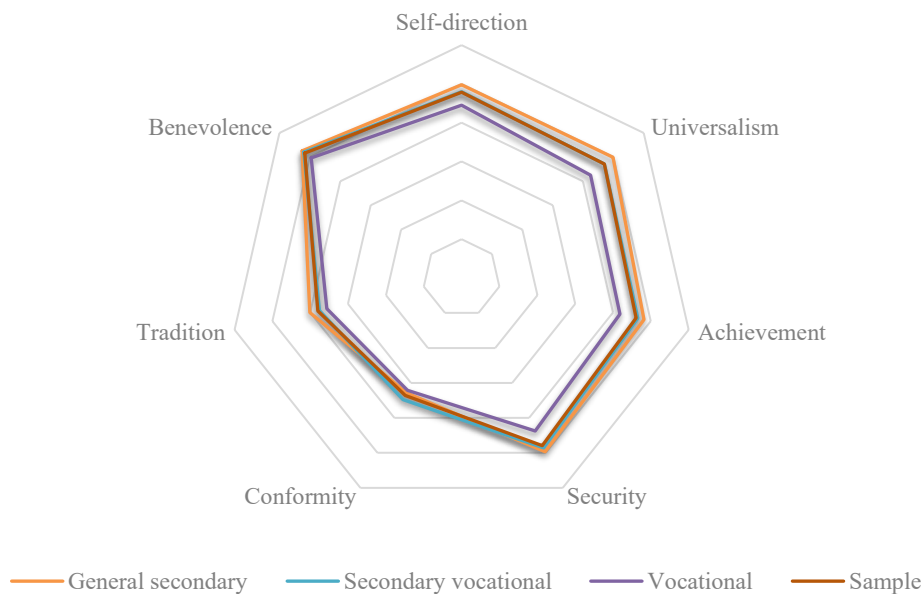


Source: own editing

Although the importance of all values in the regions of Western Transdanubia and the Southern Great Plain is above the sample average, *universalism* (collective self-transcendence) and *tradition* (collective-conservatism) in Western Transdanubia stand out. The other regions are below average in terms of the importance of all values (except for security in the Northern region), but by far the lowest *universalism* is in Central Hungary, (collective self-transcendence) which is noteworthy. It can be stated that the collective-conservative values are more important for teenagers in Western Transdanubia and the Southern Great Plain than in other parts of the country. However, *self-fulfilment* (openness to change) and *achievement* (self-enhancement) are also stronger in the two regions.

Schwartz values do not show a normal distribution by school type. Non-parametric tests show significant differences for seven values: *self-direction* (test statistic = 10.714,  $p < 0.005$ ), *universalism* (test statistic = 32.701,  $p < 0.001$ ), *performance* (test statistic = 17.769,  $p < 0.001$ ), *security* (test statistic = 19.928,  $p < 0.001$ ), *conformity* (test statistic = 9.062,  $p = 0.011$ ), *tradition* (test statistic = 13.232,  $p = 0.001$ ) and *benevolence* (test statistic = 8.132,  $p = 0.017$ ). The orange line in the radar chart (Figure 27) indicates the sample mean, which is followed almost perfectly by the average of the secondary vocational students' responses; the average of vocational students for all Schwartz-values is below the sample average, while for general secondary students' all values are more important than the sample average. In particular, the values of *self-direction* (individualistic-openness), *achievement* (individualistic-self-enhancement), *universalism* (collective-self-transcendence), and *security* (collective-conservation) rise above the sample average.

27. Figure: Schwartz-value differences by school type



Source: own editing

Exactly the same values are below the sample average for young people attending vocational education. This result identifies a difference between school types. It can be stated that the above four values are more important for general secondary students than for vocational education students, and the secondary vocational students also shows a middle path characteristics among school types.



### *Relationships of Schwartz-value clusters*

Value clusters identified in Chapter 10.1.3 show significant differences by gender, region and school type. Crosstabulation involving the gender of the respondents proves the deviations of the **individualistic** clusters only. Table 25 shows that the cluster of *leaders* and *followers* predominantly consist of women, and this distribution is statistically significant.

25. Table: Differences in the individual clusters by gender

<b>Individualistic clusters</b>	<b>Men</b>	<b>Women</b>	<b>Pearson <math>\chi^2</math></b>	<b>p-value</b>
Restrained	64	55		
Within cluster distribution	53.8%	46.2%		
Leader	86	128	8.309	0.016
Within cluster distribution	40.2%	59.8%		
Follower	68	112		
Within cluster distribution	37.8%	62.2%		

Source: own editing

Examined by region, the clusters of the **collective** dimension show a statistically significant distribution. Based on Table 26, it can be said that the majority of *conformists* come from the region of Southern Transdanubia, while the region of Western Transdanubia provides the fewest *conformist* respondents. The same is true for the cluster of *individualists* and partly for the cluster of *idealists*, with the difference that the *idealist* cluster has the second highest proportion in Western Transdanubia. It can be clearly seen that in all regions except the Northern region, the majority of respondents can be described as *idealistic*, while the smallest proportion are *individualists*. The consolidation of individuality, as one of the adolescents' primary motivations, can explain the pattern of clusters.

The distribution of cluster elements by school type shows a significant difference for both value dimensions (Table 27). In all dimensions, those attending secondary vocational education account for the largest share of all clusters, which can be explained by the fact that 46.4% of the total sample belongs to secondary vocational education.

26. Table: Regional differences of collective clusters

Collective cluster	I.	II.	III.	IV.	V.	VI.	Pearson $\chi^2$	p-value
Conformist	28	10	31	57	39	29	38.122	<0.001
Within-cluster	14.4%	5.2%	16.0%	29.4%	20.1%	14.9%		
Individualistic	14	1	9	18	10	5		
Within-cluster	24.6%	1.8%	15.8%	31.6%	17.5%	8.8%		
Idealist	29	48	43	49	46	47		
Within-cluster	11.1%	18.3%	16.4%	18.7%	17.6%	17.9%		

I. Central Hungary, II. Western Transdanubia, III. Central Transdanubia, IV. Southern Transdanubia, V. Northern region, VI. Southern Great Plain

Source: own editing

The distribution of respondents within school type is more interesting: students in general vocational education and secondary vocational education are predominantly *leaders* and *individualists*, while those in vocational schools are more *restrained* or *followers* and conformists. Although the dissertation did not originally intend to explore this, rather sociological differences, a faultline can be identified that may have an effect on material attitudes and motivations to use social media.

27. Table: Individualistic and collective cluster differences by school type

Individualistic clusters	General secondary	Secondary vocational	Vocational	Pearson $\chi^2$	p-value
Restrained	28	50	41	26.109	<0.001
Within cluster distribution	23.5%	42.0%	34.5%		
Leader	86	102	26		
Within cluster distribution	40.2%	47.7%	12.1%		
Follower	55	86	39		
Within cluster distribution	30.6%	47.8%	21.7%		
Collective clusters	General secondary	Secondary vocational	Vocational	Pearson $\chi^2$	p-value
Conformist	54	92	48	30.209	<0.001
Within-cluster	27.8%	47.4%	24.7%		
Individualistic	12	21	24		
Within-cluster	21.1%	36.8%	42.1%		
Idealist	103	125	34		
Within-cluster	39.3%	47.7%	13.0%		

Source: own editing

### 13.10. Differences between Uses & Gratification factors regarding social media use

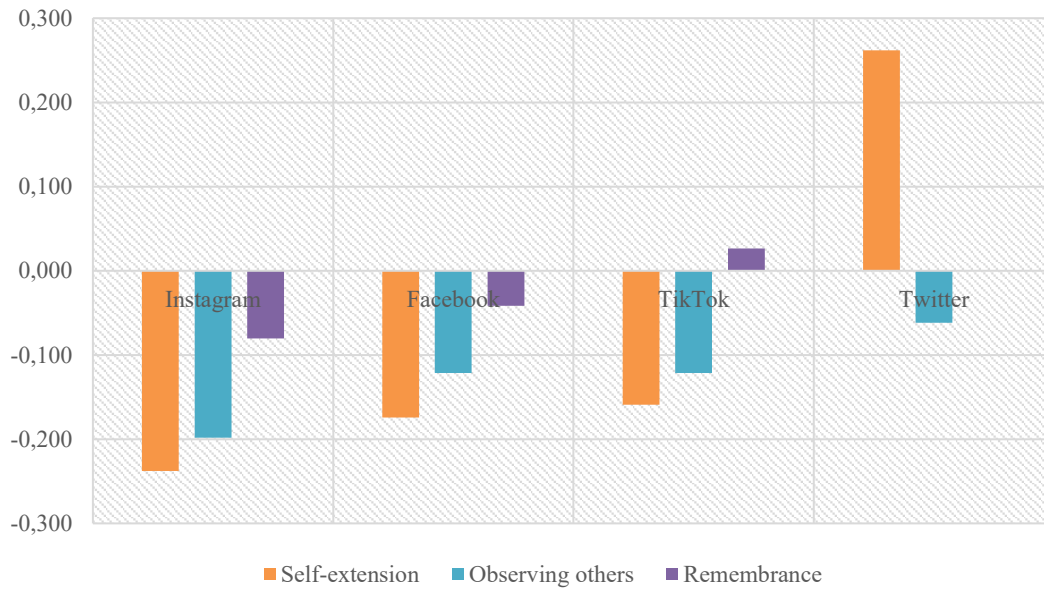
By comparing the frequency of social media use and the factors in the Uses & Gratifications scale (Table 25), it is possible to determine what motivation is typically associated with the use of each social media site. In the following analysis, the values off the three U&G factors: *self-extension*, *observing of others*, and *remembrance* were the dependent variables, and the frequency of platform use was the independent variable. The normal distribution of the dependent variable can be checked by Kolmogorov – Smirnov and Shapiro – Wilk tests once more. The tests did not confirm the normal distribution of variables for any of the social media platforms, so a non-parametric Kruskal – Wallis test was used to examine the differences between the means of the motivational factors. The bar charts in the three figures below show the evolution of the deviations from sample mean in case of each motivational factors according to the frequency of use of each social media portal. Figure 28 illustrates the responses of those who never used each portal, Figure 29 represents the responses of infrequent users of the portals, and Figure 30 illustrates the responses that are frequent (weekly and daily).

28. Figure: Differences in motivations between those who **never** use each social networking site



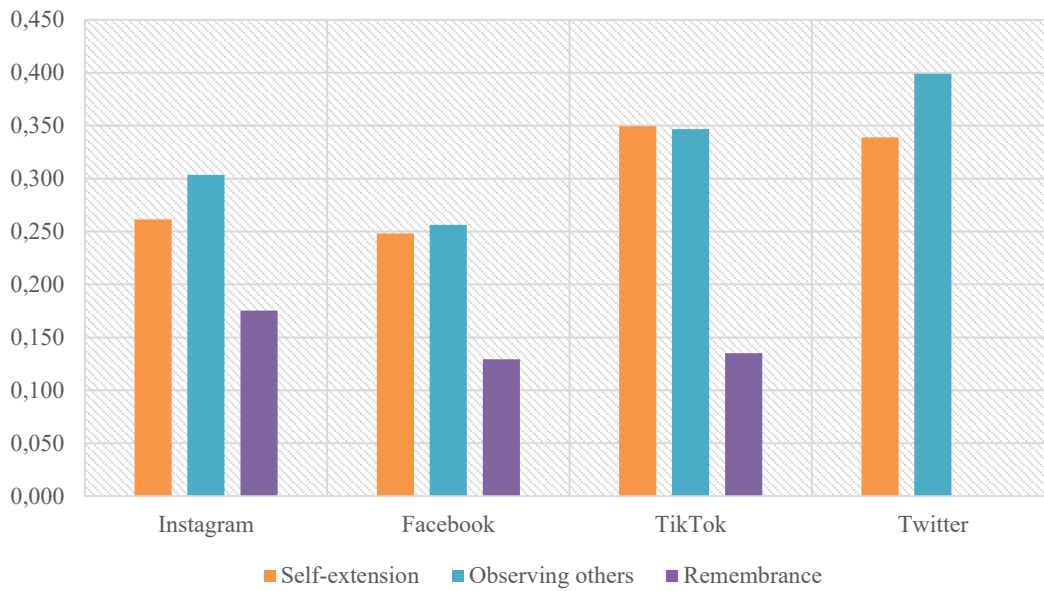
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29. Figure: Differences in motivations between those who **infrequently** use each social networking site



Source: own editing

30. Figure: Differences in motivations between those who **frequently** use each social networking site



Source: own editing

In the case of Instagram, the difference in all motivational factors is significant: the more frequent use is most measured in the *observing of others* (49.091,  $p < 0.001$ ), *self-extension* (27.908,  $p < 0.001$ ), and moderate but increased *remembrance* (26.721,  $p < 0.001$ ). However, the motivational values of those who do not use the platform at all are far below the sample average, which further strengthens the relationship between frequency of use and motivation.

Facebook test scores show similar results, with motivation for *self-extension* (17.698,  $p < 0.001$ ), *observing of others* (27.514,  $p < 0.001$ ), and *remembrance* (12.184,  $p = 0.003$ ) increasing with frequency of use. The difference compared to Instagram is that the *self-extension* was amplified to the same extent as *observing others* among frequent users (Figure 30). The interesting thing about Figure 28 is that the motivation for *self-extension* for those who do not use Facebook at all is barely below the sample average. This phenomenon affects 30 respondents, of whom only 8 do not use any social portals at all, 21 use Instagram on a weekly or daily basis, and one uses only TikTok but on a daily basis. It can be assumed that avoiding Facebook does not reduce the motivation for *self-extension*, as it gains satisfaction on other portals (Instagram, TikTok).

Unlike the previous two platforms, TikTok's Kruskal –Wallis test showed a much higher rate of motivation for *self-extension* (34,463,  $p < 0.001$ ) and *observing others* (46,184,  $p < 0.001$ ) in parallel with the frequency of use, and even for *remembrance* (13.684,  $p = 0.003$ ), but to a much lesser extent.

Although Twitter is used among respondents, - rare and frequent use in total - the least (27.1%) is still worth examining in the same context. Compared to the other platforms, the Kruskal Wallis test showed a significant difference only for the *self-extension* (12.737,  $p = 0.002$ ) and *observing others* (6.774,  $p = 0.034$ ). While the motivations of those who never used Twitter were around the sample average (Figure 28), even with infrequent use of the platform, the average *self-extension* is higher than any other average (Figure 29) among frequent users. The mean of both motivational factors is one of the highest values in the total sample. To explore the reasons, it is worth examining individual cases more closely. The overall (weekly and daily) frequency of the use of other social portals is high among those who never use Twitter: Instagram 77%, Facebook 64%, TikTok 61%. Even infrequent users of Twitter show

even higher Instagram activity (weekly and daily frequency rates of 86%), while Facebook (62%) and TikTok (68%) show roughly similar rates. However, frequent use of Instagram (89%) and TikTok (79%) jumps among frequent Twitter users, while Facebook still accounts for 67%. These patterns suggest that the group of non-Twitter users is otherwise strongly tied to other portals, and the group of frequent Twitter users is likely to use Twitter even more strongly, and even presumably, to *self-expand* and *observe others*.

Because Instagram is primarily a visual content service, TikTok exclusively so, and Twitter generally so, the above results support the hypothesis that frequent use of visual portals goes hand in hand with a stronger need for *self-extension* and *observing others*.

### **13.11. Examination of social media use**

The relationships between the use and non-use of social media portals involved in the research are presented below. Table 28 provides statistics for pairs of significantly related variables. It can be stated that the majority of Instagram and TikTok users are women, and the majority of those who do not use these platforms are men. Another curiosity is that Twitter is used by slightly more men than women. However, according to the Cramér's V measurement, there is only a weak association between the gender of respondents and the frequency of platform use. A value of zero for lambda, whose dependent variables are usage and non-usage, means that knowledge of gender as an independent variable does not reduce the prediction error for platform usage, i.e., the gender of respondents has no predictor role at all. If the value of lambda is zero, the knowledge of the independent variable does not reduce the prediction failure for platform usage, thus the gender of the respondents (independent variable) does not predict platform usage (dependent variable).

28. Table: Social media use by gender

<b>Instagram</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Men	60.8%	40.5%	7.752	.005	.123	.000
Women	39.2%	59.5%				
<b>Twitter</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Men	38.2%	54.0%	10.250	.001	.141	.000
Women	61.8%	46.0%				
<b>TikTok</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Men	57.4%	41.5%	16.718	< .001	.181	.000
Women	42.6%	58.5%				

Source: own editing

Regional differences in the use of social media sites are shown in Table 29. Among non-users of Instagram, Central Transdanubia has the largest share, while the Southern Transdanubia region has the highest user share. The same is true for Facebook, but in this case, Central Transdanubia stands out from the inherently small number of non-platform users ( $n = 30$ ).

TikTok gives a similar pattern to Instagram, with the difference that the proportion of respondents from Western Transdanubia is even lower on the platform, and the proportion of users from South Transdanubia is very high. Cramér's V shows the strongest association relationship for TikTok (.198); however, none of the lambda community portals show the predictive power of the region as an independent variable.

Comparing school types, general secondary students provide (Table 30) the highest proportion of those who do not use Facebook and TikTok. For both platforms, those attending secondary vocational education are dominant, which is not surprising in the case of Facebook, as 94% of the total sample ( $N = 513$ ) use Facebook, and the majority of the sample are students of secondary vocational education (46.4%). In both cases, Cramér's V indicates a weak association between the variables examined. In addition, according to lambda, the school type is not able to predict platform usage in either case.

29. Table: Social media use by region

<b>Instagram</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Central Hungary	5.9%	14.7%				
Western Transdanubia	17.6%	10.8%				
Central Transdanubia	33.3%	14.3%				
Southern Transdanubia	17.6%	24.9%	18.071	.003	.188	.000
Northern region	9.8%	19.5%				
Southern Great Plain	15.7%	15.8%				
<b>Facebook</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Central Hungary	10.0%	14.1%				
Western Transdanubia	16.7%	11.2%				
Central Transdanubia	40.0%	14.7%				
Southern Transdanubia	13.3%	24.8%	15.727	.008	.175	.000
Northern region	10.0%	19.0%				
Southern Great Plain	10.0%	16.1%				
<b>TikTok</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
Central Hungary	8.1%	15.9%				
Western Transdanubia	18.4%	9.0%				
Central Transdanubia	21.3%	14.3%				
Southern Transdanubia	16.2%	27.1%	20.160	.001	.198	.000
Northern region	19.9%	18.0%				
Southern Great Plain	16.2%	15.8%				
Source: own editing						



The three-group classifications of platform use (never, rarely, often) to demonstrate the significance of the relationship between variables confirm that women are even more prevalent among frequent Instagram and TikTok users.

30. Table: Social media use by school type

<b>Facebook</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
General secondary	60.0%	31.3%				
Secondary vocational	23.3%	47.8%	10.979	.001	.146	.000
Vocational	16.7%	20.9%				
<b>TikTok</b>	<b>Non-user</b>	<b>User</b>	$\chi^2$	<b>p-value</b>	<b>Cramér's V</b>	$\lambda$
General secondary	47.1%	27.9%				
Secondary vocational	38.2%	49.3%	17.026	< .001	.182	.000
Vocational	14.7%	22.8%				

Source: own editing

The three-group classifications of platform use by region do not help in comprehension, so we do not present in here. After comparing by school type, new information suggests that 50.8% of secondary vocational students use Instagram frequently, while nearly half of general secondary students (49.7%) tend to use it infrequently and the majority of vocational students (59.4%) prefer to use it frequently. It is important to note that the binary (use and non-use) statistical analysis of Instagram use was not significant, so the three-group classification is a more reliable variable in this case. The assumption that visual-based platforms are used more in vocational students is confirmed by TikTok statistics. Only 23% of general secondary students use the platform frequently, which is 18.9% of all frequent users. The same proportions for those attending secondary vocational school are 46.6% and very high at 53.9%; and 52.8% of vocational education use Tiktok frequently.

## 13.12. Correlation analysis

### 13.12.1. Examination of the relationships of U&G factors with values

The relationship between individual Schwartz values and U&G motivational factors can be examined using a bivariate correlation. The summary in Table 31 identifies a faultline between *self-extension*, *observing others*, and *remembrance* motivations. The sign of the significant correlation coefficients of the *self-extension* is negative, so the more important the values of *hedonism*, *universalism*, *benevolence* and *security* are to the individual, the less motivated they are in the use of social media for *self-extension*. It can be stated that the pursuit of self-transcendence, the need for security and the desire for the individual to feel comfortable are opposed to the expansion and sharing of personality and self-created content on social media sites.

*Observing others* and *remembrance* showed significant correlation with almost all Schwartz-values. The positive sign of coefficients means that the importance of a given value and the significance of a given motivation shift in the same direction. The strongest correlation coefficient between the value of *security* and *observing others* is one of the most interesting findings. Furthermore, the positive correlation of *power* value with all the motivational factors is also significant. It can be seen that *self-extension* in social media is accompanied by stronger *power* aspirations. The relationship system of *conformity* is also remarkable, based on which it can be assumed that the use of social media is part of a kind of social norm, a system of expectations.

31. Table: Correlations between U&G factors and Schwartz-values

<b>Individualistic</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Collective</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Self-direction			.094*	Universalism	-.146**	.088*	.097*
Stimulation		.097*	.200**	Benevolence	-.220**	.189**	.093*
Hedonism	-.106*	.180**	.193**	Conformity	.133**	.155**	.150**
Achievement		.167**	.133**	Tradition			.108*
Power	.218**	.152**	.093*	Security	-.125**	.201**	.164**
<b>Self-transcendence</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Self-enhancement</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Universalism	-.146**	.088*	.097*	Achievement		.167**	.133**
Benevolence	-.220**	.189**	.093*	Power	.218**	.152**	.093*
<b>Openness to change</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Conservation</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Self-direction			.094*	Tradition			.108*
Stimulation		.097*	.200**	Security	-.125**	.201**	.164**
I.	Self-extension						
II.	Observing others						
III.	Remembrance						
	**: significant at 1%						
	*: significant at 5%						

Source: own editing

The values of the motivational factors do not show a normal distribution in any Schwartz-value dimension, therefore the difference between the groups can be checked by a non-parametric test. Table 32 represents how the differences of every motivational factor in both dimensions are significant.

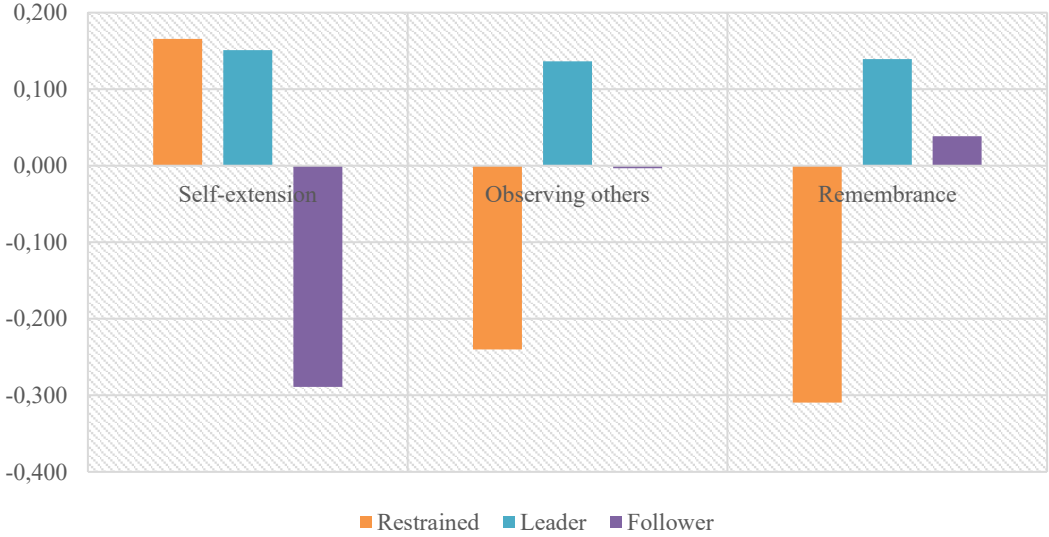
32. Table: Deviations of U&G motivational factors in the two value dimensions

Dimension	Self-extension		Observing others		Remembrance	
	<i>test statistic</i>	<i>p-value</i>	<i>test statistic</i>	<i>p-value</i>	<i>test statistic</i>	<i>p-value</i>
Individualistic	20.175	< 0.001	10.042	0.007	16.359	< 0.001
Collective	20.614	< 0.001	16.076	< 0.001	16.304	< 0.001

Source: own editing

Figure 31 illustrates the deviation of motivational factors from the sample mean in the clusters of the individualistic value dimension. Motivations for *observing others* and *remembrance* are by far the lowest among members of the restrained cluster, whereas the *self-extension* motivation is highest here. Leaders show high values for all motivations, while followers are least motivated for *self-extension*.

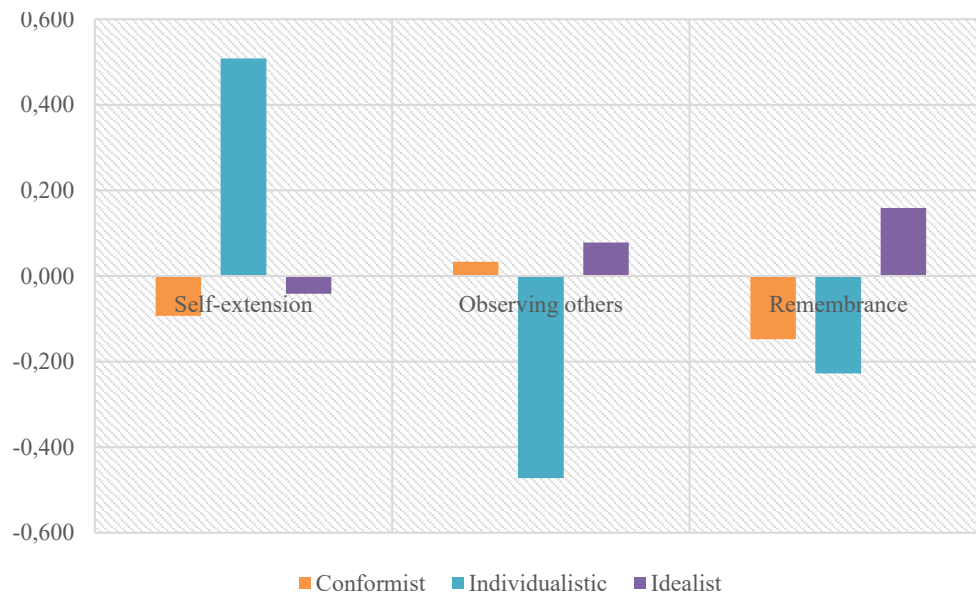
31. Figure: Deviation of U&G motivations in the **individualistic** clusters



Source: own editing

It is worth examining how the frequency of use of different social media platforms varies between clusters. The distribution of clusters according to the frequency of social media use is significant only in the case of Instagram ( $\chi^2 = 13.542$ ,  $p = 0.009$ ). Cramér V (.113), in addition, shows a weak association relationship. It can be seen that while only 42% of *restrained* and *followers* use Instagram frequently, 58% of *leaders* are frequent users, with the lowest number of non-users (7%). Consequently, half of frequent users are *leaders* (50%), ahead of *followers* (30%) and *restrained* (20%).

32. Figure: Deviation of U&G motivations in the **collective** clusters



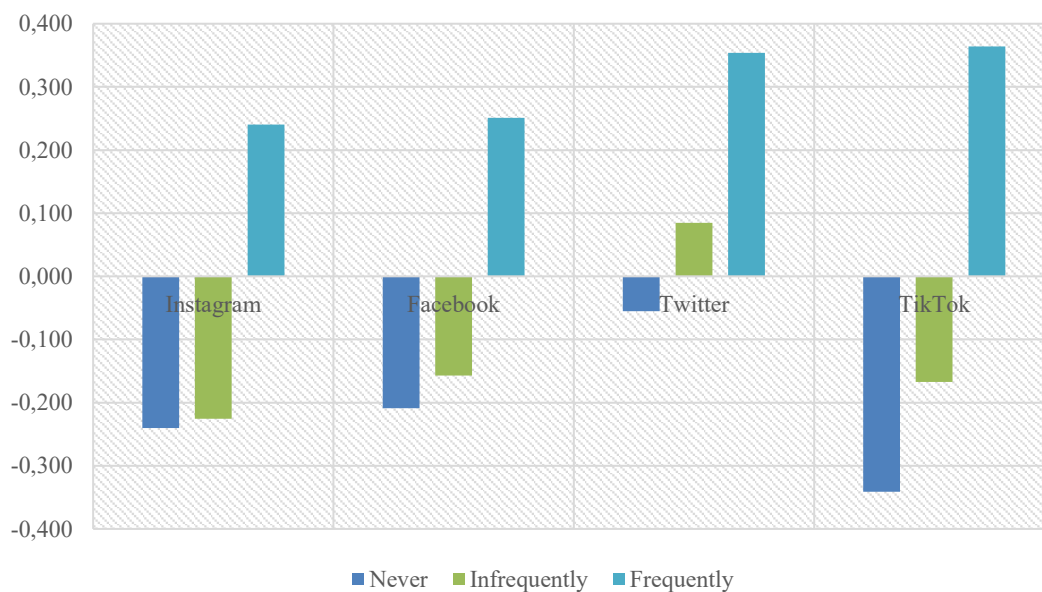
Source: own editing

The motivational factors of the clusters of the collective value dimension show an interesting pattern (Figure 32). While the motivations of conformists and idealists revolve around sample average, the idealists are significantly above or below the sample average. It can be seen that the strongest motivation for individualists in social media use is *self-extension*. Unfortunately, the data do not show which portal shows this motivation the most, because the comparison of platforms and clusters does not show a significant distribution in either case. This is probably because individualists make up only 11% of the total sample ( $n = 57$ ), so for example, for TikTok the largest proportion of this subsample is common and the smallest proportion is non-user, the difference is not statistically significant.

### 13.12.2. Examination of the relationship of materialism

In order to meet the objectives of the research, it is necessary to examine the averages of the materialism dimensions based on the frequency of use of the examined social portals. In the classification of **Instagram** use or non-use, the difference between the averages of the dimensions of *happiness* and *success* is not significant, but the difference between the *centrality* is. The main means of *centrality* follow a normal distribution, as evidenced by the results of the Kolmogorov – Smirnov ( $p = 0.200$  and  $p = 0.052$ ) and the Shapiro – Wilk test ( $p = 0.605$  and  $p = 0.159$ ), respectively. Analysis of variance can be performed based on the normal distribution, the result of which shows a significant difference between the means ( $F = 12.517$ ,  $p < 0.001$ ) and a weak relationship between the variables ( $\eta = 0.155$ ). That is, it can be said that the attitude of those who do not use Instagram at all to obtain additional goods is much lower (average = 3.591, standard deviation = 1.010) compared to those who use it (average = 4.060, standard deviation = 0.885).

33. Figure: Deviation of **success** dimension of materialism by the frequency of social media use



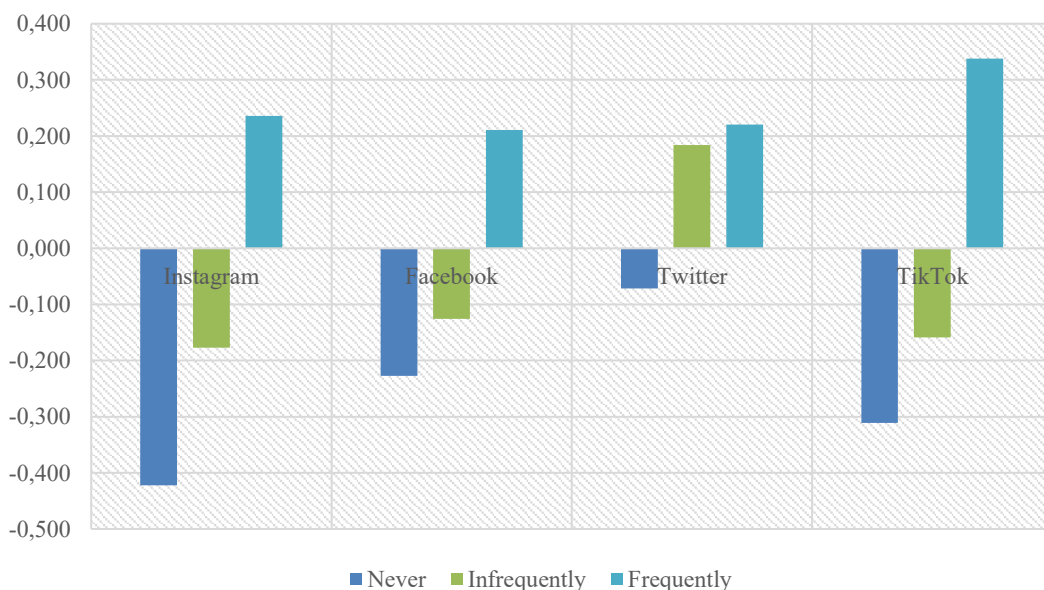
Source: own editing

The classification of respondents into three categories: non-, infrequent and frequent users, results in an even more sophisticated divergence. Since in this case the normality tests did not confirm the normal distribution of the variables, the non-parametric Kruskal – Wallis test proved that the deviations from the sample average

(Figure 33) were significant for *success* and Instagram (test statistic = 29.045,  $p < 0.001$ ). The same is true for *centrality*, the non-parametric test of which also showed a significant difference in the means (test statistic = 37.925,  $p < 0.001$ ).

The binary use of **Facebook** (user and non-user) is unrelated to any dimension of materialism. However, the triple segmentation led to results similar to Instagram. In the absence of a normal distribution, the non-parametric test demonstrated that the deviation from sample average illustrated in Figure 33 for *success* (test statistic = 22.538,  $p < 0.001$ ) is significant. In addition, the deviation from sample average for *centrality*, illustrated in Figure 34, is also significant (test statistic = 21.479,  $p < 0.001$ ). Frequent users' values rise above the sample average to the same as Instagram, however, it is worth noting that non-use of Instagram is associated with a much weaker centrality than not using Facebook. This fact further strengthens the role of visual social media portals in in the development of materialism.

34. Figure: Deviation of **centrality** dimension of materialism by the frequency of social media use



Source: own editing

The mean of the *happiness* dimension differs significantly (test statistic = 13.493,  $p < 0.001$ ) between **Twitter** users (mean = 4.006, standard deviation = 1.125) and non-users (mean = 3.593, standard deviation = 1.155). Similarly, the *success* dimension is significant (test statistic = 5.376,  $p = 0.020$ ), although in this case there is no noteworthy difference between non-users (mean = 3.4037, standard deviation

0.9636) and users (mean = 3.608, standard deviation 1.011) of Twitter. There was also a significant difference in the means of *centrality* ( $F = 8.700$ ,  $p = 0.003$ ) between users (mean = 3.942, standard deviation = 0.920) and non-users (mean = 4.206, standard deviation = 0.848). Since in the latter case the values per group are proven to be normally distributed (Kolmogorov – Smirnov:  $p = 0.200$  and  $p = 0.200$ , Shapiro – Wilk:  $p = 0.365$  and  $p = 0.358$ ), the eta ( $\eta$ ) can be calculated in addition to the analysis of variance, which shows a weak relationship between the variables (0.12).

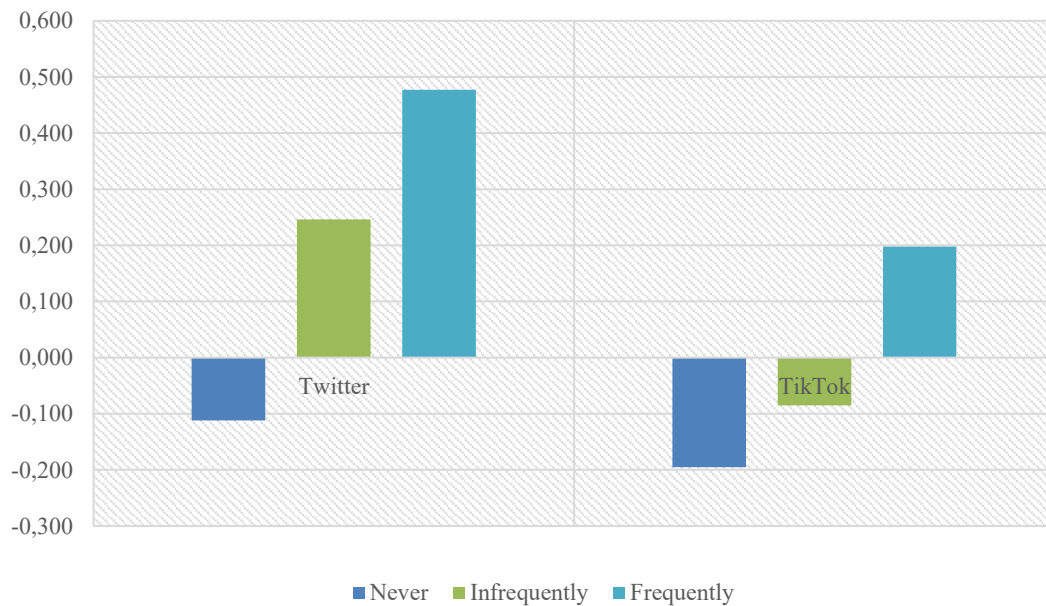
Since the normality tests for the *happiness* and *success* dimensions did not confirm the normal distribution of the variables, the non-parametric Kruskal – Wallis test demonstrated that the deviations in the bar chart in Figure 35 were significant for *happiness* and Twitter (test statistic = 14.338,  $p < 0.001$ ). The same is true for *success*, the non-parametric test of which also showed a significant difference in the means (test statistic = 7.108,  $p < 0.029$ ). The values of the main mean of *centrality* are normally distributed according to the Kolmogorov – Smirnov ( $p = 0.200$ ,  $p = 0.200$ ,  $p = 0.200$ ) and Shapiro – Wilk tests ( $p = 0.365$ ,  $p = 0.631$ ,  $p = 0.282$ ). Based on this, the analysis of variance can be performed, which shows a significant difference between the groups ( $F = 4.363$ ,  $p < 0.013$ ) and a weak relationship between the variables ( $\eta = 0.130$ ).

The results of **TikTok** (Figure 35) are quite similar to Twitter, with a significant difference in the *happiness* dimension (test statistic = 6.302,  $p = 0.012$ ) with binary (users and non-users) classification of respondents, although mean of users (3.775) and non-users (3.510) does not show remarkable difference. There is a slightly larger difference for *success* (test statistic = 20.690,  $p < 0.001$ ) where the mean of non-users (3.117, standard deviation = 0.985) is well below that of users (mean = 3.582, standard deviation = 0.950). In the case of *centrality*, an even larger difference can be measured (test statistic = 19.377,  $p < 0.001$ ) in favor of users (mean = 4.125, standard deviation = 0.895) compared to non-users (mean = 3.702, standard deviation = 0.873).



The triple segmentation in the *happiness* dimension is not normally distributed, but differs significantly (test statistic = 12.370,  $p = 0.002$ ). *Success* is not normally distributed, but it is significant (test statistic = 48.989,  $p < 0.001$ ), as is *centrality*, which has a test statistic of 47.573 and a p-value of less than 0.001.

35. Figure: Deviation of **happiness** dimension of materialism by the frequency of social media use



Source: own editing

In conclusion, the preference for material success and the acquisition-centred attitude increase with the frequency of use for all the social network sites examined. However, material *happiness* changes significantly only in the case of Twitter and TikTok. Even an infrequent use of Twitter is associated with higher-than-average materialism, which is because Twitter users tend to use social portals more intensively. The results confirm that the use of visuality-based platforms is associated with stronger materialism (H6 supported). Although based on the charts above, the pattern of Instagram is not significantly different from the pattern of Facebook, it is still worth noting a difference: the attitude of non-users of Instagram to obtain is the lowest. Similarly, *success* preferences for TikTok non-users are well below the sample average.

Table 33 shows the significant correlation coefficients between materialism dimensions and Schwartz-values. Of the thirty variable pairs in total, four are significant at 5% and twelve at 1% significance level. In materialism research, special attention is paid to the sign of the coefficients. The positive sign of two variables means a shift in the same direction, that is, if the given value is more important, then the materialism also strengthens and vice versa. In contrast, a negative sign indicates the opposite shift of variables, so if a given value becomes more important, materialism decreases and vice versa. It can be seen that if a value correlates with several dimensions of materialism, then each coefficient has the same sign. Therefore, according to the sign of the correlation coefficients, the values can be divided into two groups: **materialist** and **non-materialist** values. **Non-materialist** values are *benevolence, self-direction, universalism* and *tradition*, **materialist** values are *security, achievement, stimulation, power* and *conformity*. It can be observed that the positive and negative signed values fit almost perfectly with the Schwartz value dimensions shown in Table 19. Based on this, Table 35 illustrates the **materialist** values in red and the **non-materialist** values in blue.

33. Table: Significant correlation coefficients between the dimensions of materialism and Schwartz-values

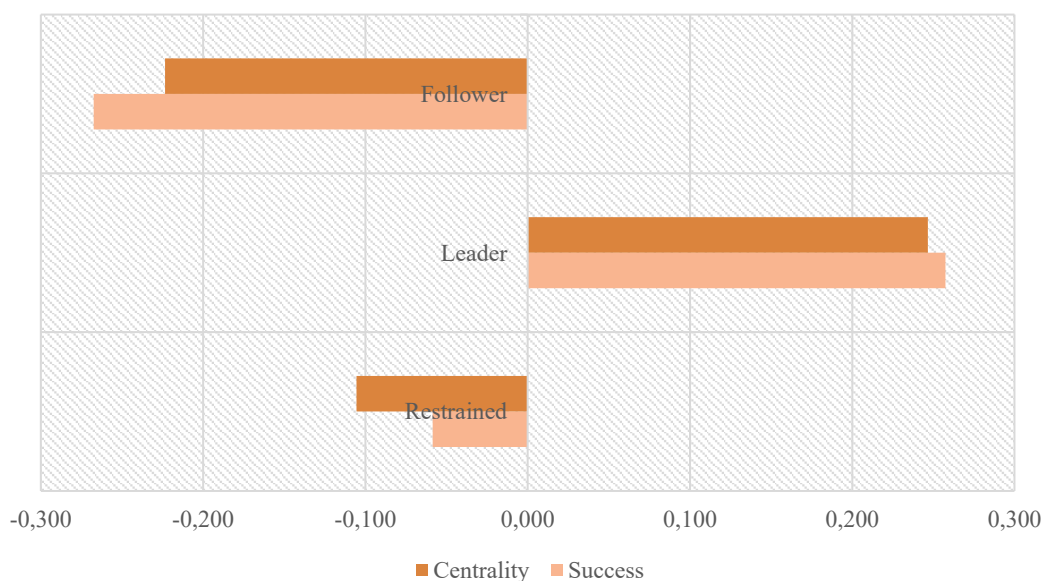
<b>Individualistic</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Collective</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Self-direction		<b>-.111*</b>		Universalism		<b>-.126**</b>	<b>-.231**</b>
Stimulation			<b>.097*</b>	Benevolence		<b>-.110*</b>	<b>-.143**</b>
Hedonism				Conformity		<b>.253**</b>	
Achievement	<b>.140**</b>	<b>.173**</b>	<b>.137**</b>	Tradition			<b>-.176**</b>
Power	<b>.255**</b>	<b>.400**</b>	<b>.327**</b>	Security	<b>.155**</b>		<b>.096*</b>
<b>Self-transcendence</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Self-enhancement</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Universalism		<b>-.126**</b>	<b>-.231**</b>	Achievement	<b>.140**</b>	<b>.173**</b>	<b>.137**</b>
Benevolence		<b>-.110*</b>	<b>-.143**</b>	Power	<b>.255**</b>	<b>.400**</b>	<b>.327**</b>
<b>Openness to change</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>	<b>Conservation</b>	<b>I.</b>	<b>II.</b>	<b>III.</b>
Self-direction		<b>-.111*</b>		Tradition			<b>-.176**</b>
Stimulation			<b>.097*</b>	Security	<b>.155**</b>		<b>.096*</b>
I.	Happiness						
II.	Success						
III.	Centrality						
	**:	significant at 1%					
	*:	significant at 5%					

Source: own editing

Based on the classification of **individualistic** and **collective** value dimensions, it can be stated that while **individualistic** values are more material, this is far from clear for **collective** values. In fact, the results show an intangible nature of collective values. Based on their relationships with materialism of the values at both ends of the **self-transcendence-self-enhancement axis**, it is clear that the values of **self-transcendence** are non-materialists and the values of **self-enhancement** are materialist. However, this distinction is not valid between the endpoints of the axis of **openness to change** and **conservatism**. It can also be observed that in the individualist value dimension and the pursuit of self-enhancement, the strongest material connections appear to the value of *power*.

Examination of the means of the materialism dimensions by value cluster also showed significant differences (Figure 36). In the case of clusters of the **individualistic** value dimension, the values of the *success* materialism dimension do not follow a normal distribution; therefore, the non-parametric Kruskal – Wallis test can be used to prove differences between *leaders*, followers and moderates (test statistics 27,466,  $p < 0.001$ ). The difference between the means of the acquisition-centricity dimension can also be proved by a non-parametric test (test statistic 25.578,  $p < 0.001$ ).

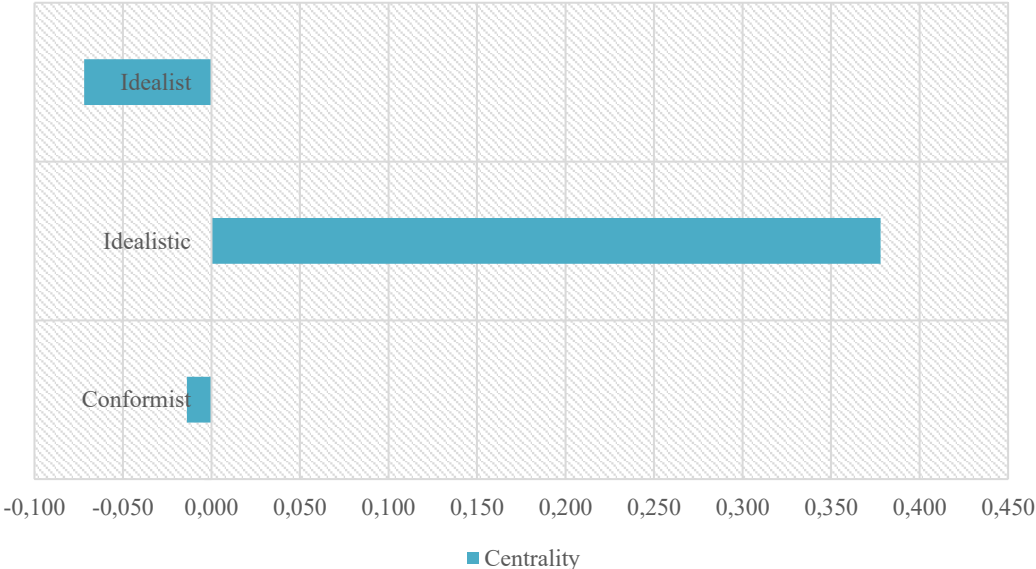
36. Figure: Deviation of materialism dimensions in the individualistic clusters



Source: own editing

In **collective** value clusters (Figure37), only the *centrality* dimension of materialism shows a significant difference (test statistic = 12.598, p = 0.002). The acquisition-centred attitude of the individualism of only 57 people was far above the sample average.

37. Figure: Deviation of centrality dimensions in the collective clusters



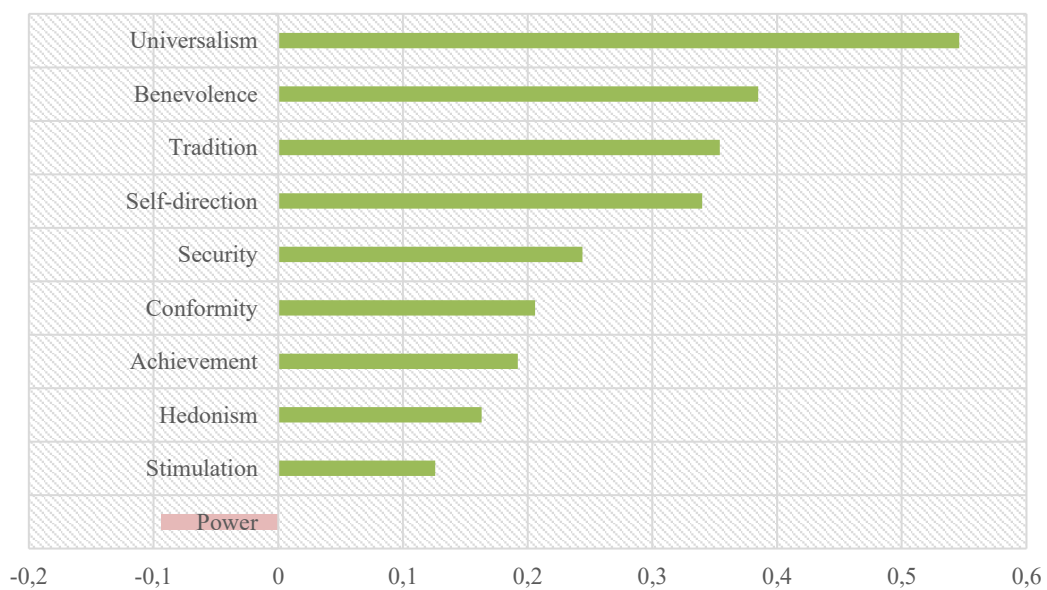
Source: own editing

The role of certain value clusters in the motivations for social media use and can be observed based on the size of the differences. *Followers* (individualistic clusters) are the least acquisition-centred and self-extension is also the least important to them. The acquisition-centred attitude and self-extension of *individualists* (collective cluster) is the highest compared to all clusters, while the motivation to observe others is the lowest. If we accept that the collective value dimension is more focused on the well-being of the community with the marginalization of individuality, then materialism and motivational traits reinforce the selfish traits of *individualists*.

13.12.3. Examination of the relationships of voluntary simplicity

Comparing voluntary simplicity with individual Schwartz values results in a significant correlation in all cases. The bar chart in Figure 38 illustrates the correlation coefficients per variable pair in order of relationship strength. Based on the order of the correlation coefficients, it can be concluded that *universalism* is the strongest variable pair for simplification, but *benevolence*, *tradition*, and *self-direction* also show a strong relationship. Except for *self-direction*, the strongest values are **collective** values, which confirms the communal nature of the approach of simplicity, sustainability and environmental awareness. Of all, the value of *power* has the opposite sign to simplification, even if the magnitude of the relationship is negligible (very close to zero, indicating uncorrelation of variables).

38. Figure: Correlation between voluntary simplicity and Schwartz values

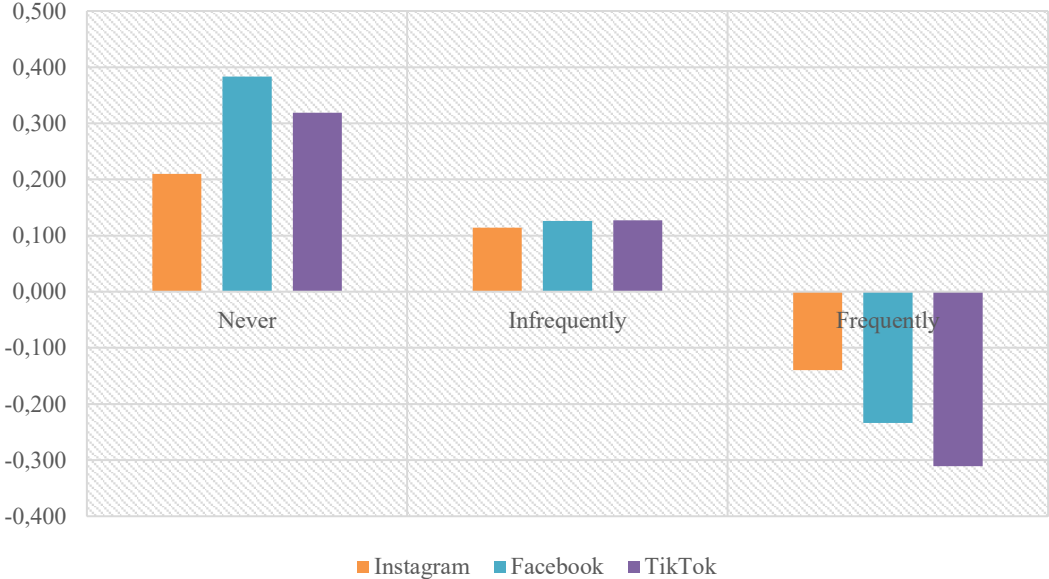


Source: own editing

A noteworthy connection emerges from the comparison of the dimensions of materialism and voluntary simplicity. The Pearson correlation coefficients, with a significant relationship, are as follows: happiness = -0.178 ( $p < 0.001$ ), financial success = -0.192 ( $p < 0.001$ ), acquisition-centricity = -0.498 ( $p < 0.001$ ). In addition, the sign of the coefficients confirms the assumption that materialism and voluntary simplicity are opposite attitudes, that is, the more material one is, the less one strives for simplification, and vice versa. Comparing with U&G motivational factors, it can

be stated that *self-extension* (Pearson =  $-.091$ ,  $p = 0.005$ ) and *remembrance* (Pearson =  $.120$ ,  $p = 0.001$ ) are significant, but their strength is negligible. The comparison of the frequency of use of social network sites with voluntary simplicity has yielded a result that refutes the preliminary assumptions.

39. Figure: Deviation of the average of the voluntary simplicity from the sample mean (grouped according to the frequency of use of social media)



Source: own editing

According to the bar charts in Figure 39, frequent users of social media (especially TikTok and Facebook) have the lowest tendency towards voluntary simplification. Accordingly, those who have never used social platforms (especially Facebook) claim to be the most open to a simpler consumer existence.

### 13.13. Causal effect analysis

#### 13.13.1. *Univariate linear regression analysis*

To answer the research questions, we need to examine which values influence the different dimensions of materialism. As a first step, univariate linear regression analysis was performed. The independent variables in the OLS regression were Schwartz-values that were significantly correlated with the materialism dimension used as the dependent variable (Table 33). Table 34 represents that although all parameters of the **happiness** dimension of the materialism scale are significant, the test result on the effect of *security* value on happiness should be rejected as an independent variable, because its residuals do not follow a normal distribution. However, it can be stated that the importance of *power* has the greatest influence ( $R^2 = 0.065$ ) on the identification of **happiness** with material goods.

In the case of **success**, the distribution of the residuals of the independent variables, *conformity*, *achievement*, and *power*, is not a normal distribution, and therefore cannot be interpreted despite their significant parameters. This is unfortunate because it is these values that would have the greatest impact on the identification of success with possession of material goods, especially *power* ( $R^2 = 0.160$ ). Although all parameters of the regression model explained by *universalism*, *self-direction*, and *benevolence* meet methodological expectations, their explanatory power is weak.

Contrary to the above, all independent variables on **centrality** meet methodological requirements in all respects, including the normal distribution of residues. Considering the explanatory power of each value, it can be stated that the *power* aspirations of the questioned teenagers ( $R^2 = 0.107$ ) have the greatest influence on the desire to acquire ever more material goods. The role of collective values in alleviating materialism is reinforced by the strong explanatory power of *universalism* ( $R^2 = 0.053$ ) and the negative slope of the regression line. That is, the more the value of universalism is characteristic of adolescents, the more their desire to acquire new material goods diminishes. It can be stated that the materialism of adolescents is primarily strengthened by *power* and *achievement*, and is weakened by *universalism*, *tradition* and *benevolence*.

34. Table: The univariate OLS regression models of Schwartz-values on materialism

<i>Happiness</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	<i>β independent</i>	<i>β constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Power	.255	.065	35.492	<.001	.246	2.808	5.957	17.720	<.001
Achievement	.140	.020	10.253	.001	.156	2.985	3.202	12.953	<.001
<i>Success</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	<i>β independent</i>	<i>β constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Universalism	.126	.016	8.243	.004	-.121	4.029	-2.871	19.828	<.001
Self-direction	.111	.012	6.323	.012	-.106	3.968	-2.515	19.188	<.001
Benevolence	.110	.012	6.302	<.001	-.115	4.054	-2.510	16.832	<.001
<i>Centrality</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	<i>β independent</i>	<i>β constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Power	.327	.107	61.179	<.001	.247	3.113	7.822	25.696	<.001
Universalism	.231	.053	28.721	<.001	-.205	4.980	-5.359	26.974	<.001
Tradition	.176	.031	16.355	<.001	-.146	4.570	-4.044	31.896	<.001
Benevolence	.143	.020	10.629	.001	-.138	4.726	-3.260	21.270	<.001
Achievement	.137	.019	9.750	.002	.119	3.464	3.122	19.205	<.001
Stimulation	.097	.009	4.872	.028	.073	3.684	2.207	23.863	<.001
Security	.096	.009	4.727	.030	.085	3.607	2.174	18.905	<.001

Source: own editing

The question, whether the motivational factors of social media use influence the development of materialism is answered by the results in Table 35. It can be seen that **happiness** is enhanced by all factors, but best of all the intention of *self-extension*. As in Table 36, it should be noted that the validity of two models influencing **success** — *observing others* and *remembrance* as independent variables — should be rejected due to the abnormal distribution of residuals. The **acquisition-centred attitude** of young people is significantly influenced only by the motivations for *observing others* and *self-extension*, the parameters of *remembrance* (F- and t-statistics) are not significant.

Considering the sign of the  $\beta$  values and the magnitude of the coefficient of determination ( $R^2$ ), it can be concluded that the development of **happiness** through material goods is weakly amplified by the independent variables. Although *self-extension* explains only 3.5% of the variance in happiness, it is close to 10% ( $R^2 = 0.096$ ) for **success**, and 5.8% for the **centrality** dimension ( $R^2 = 0.058$ ). The intention to *observe others* is also significant, with 10.4% responsible for the strengthening of centrality.



Overall, it can be stated that the materialism of young people and their strong attachment to material goods are strengthened both by the greater expansion of the individual, through individual content, and by the increased interest in similar content shared by others. In other words, the active intention to create content - at the same time attracting and impressing others - as well as the passive, inclusive interest in learning about the lives of others increase the attachment of young people to material goods.

35. Table: The univariate OLS regression models of U&G motivational factors on materialism

<i>Happiness</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Self-extension	.187	.035	18.509	<.001	.217	3.704	4.302	73.536	<.001
Observing others	.133	.018	9.133	.003	.154	3.704	3.022	72.882	<.001
Remembrance	.092	.008	4.368	.037	.107	3.704	2.090	72.547	<.001
<i>Success</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Én-kiterjesztés	.310	.096	54.394	<.001	.304	3.459	7.375	84.013	<.001
<i>Centrality</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t constant</i>	<i>t sig</i>
Observing others	.322	.104	59.283	<.001	.293	4.013	7.700	105.677	.000
Remembrance	.241	.058	31.619	<.001	.219	4.013	5.623	103.082	<.001

Source: own editing

Hypothesis H5 has been partially supported, as self-extension has a significant effect on the evolution of all dimensions of materialism (H5a). However, the other part of the statement is not always true, as financial success is not a motivation to observe others (H5b).

Univariate OLS regression models of **voluntary simplicity** including materialism dimensions as independent variables are not valid due to the non-normal distribution of residuals. Although Hypothesis 4 assumes a negative relationship between voluntary simplicity and materialism, but RQ2, to which H4 belongs, is an open-ended relationship between variables. Therefore, dependent and independent variables in the voluntary simplicity models are interchangeable. Regarding the significance of indicators and the normal distribution of residuals, all models using voluntary simplicity as a regressor are valid. The parameters of the univariate models are summarized in Table 36.

36. Table: The univariate OLS regression models of voluntary simplicity on materialism

<i>Happiness</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t</i> <i>constant</i>	<i>t sig</i>
Voluntary simplicity	.178	.032	16.687	<.001	-.191	4.616	-4.085	20.185	<.001
<i>Success</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t</i> <i>constant</i>	<i>t sig</i>
Voluntary simplicity	.192	.037	19.583	<.001	-.175	4.290	-4.425	22.277	<.001
<i>Centrality</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t</i> <i>constant</i>	<i>t sig</i>
Voluntary simplicity	.498	.248	168.682	<.001	-.419	6.010	-12.988	38.128	<.001

Source: own editing

The correlations support Hypothesis 4: there is a negative relationship between materialism and voluntary simplicity. Nevertheless, the cause-and-effect expectations primarily assumed the explanatory effect of materialism on voluntary simplicity. However, these variables are interchangeable because a one-way relationship can only be assumed in a highly rigorous research approach. There is no theoretical or empirical conclusion in the literature that would challenge whether inherently voluntary simplicity can influence the strength of attachment to goods.

Validity problems also arise due to the non-normal distribution of residuals for each model estimated with Schwartz values. Despite most of the model indicators (F-value and t-value) being significant, only the residuals of *universalism*, *conformity*, and *benevolence* follow a normal distribution. Based on the test results in Table 38, it can be concluded that *universalism* is the strongest independent variable, explaining the intention of **voluntary simplicity**, with nearly 30% of the total standard deviation

( $R^2 = 0.298$ ). The second strongest variable is *benevolence*, with a determinant coefficient of 14.8%. Despite its weak exploratory effect, *conformity* also contributes significantly to the voluntary intention to simplify. Thus, it can be proved that the values of adolescents for self-transcendence (H3a) and collective values aimed at the well-being of the community have the greatest influence on the attitude to simplification and simpler life (H3b). We need to highlight the value of *universalism*, which is the strongest positive variable of voluntary simplicity and the strongest negative variable of *centrality*.

37. Table: Univariate OLS regression of Schwartz-values on voluntary simplicity

<i>Voluntary simplicity</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i>	<i>t</i> <i>constant</i>	<i>t sig</i>
Universalism	.546	.298	217.387	<.001	.578	2.040	14.744	10.808	<.001
Conformity	.206	.043	22.718	<.001	.244	3.944	4.766	22.197	<.001
Benevolence	.385	.148	88.863	<.001	.442	2.478	9.427	10.070	<.001

Source: own editing

### 13.13.2. *Multivariate linear regression analysis*

To answer further research questions, multivariate linear regression models estimated the combined effect of the independent variables. In the context of Schwartz values, it is worth considering the classifications of the Schwartz circumplex (see Figure 5) when selecting regressors: *individualistic* and *collective* value dimensions, as well as *self-transcendence* and *self-enhancement*, finally *openness-conservation* value sets. Schwartz values that were significantly correlated with the materialism dimension used as the dependent variable were included in the regression calculations as independent variables (see Table 33).

Table 38 summarizes the indicators of regression models of the *individualistic* value dimension and the *self-enhancement* value set. Although in the univariate models (Table 35) both regressors still significantly influenced the value of **happiness**, only the positive effect of *power* is significant when included in a common model.

38. Table: Multivariate OLS regression model of Schwartz-values on the **happiness** dimension of materialism

<i>Happiness</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj.</i> <i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i> <i>constant</i>	<i>t</i>	<i>t sig.</i>
Power						.235			4.995	<.001
	.256	.065	.062	17.842	<.001		2.725	11.787		
Achievement						.027			.494	.621

Source: own editing

The indicators in Table 38 show the impact of the *individualistic* values on **success** dimension of materialism. In the model consisting of three independent variables, the effect of *achievement* is not significant. At the same time, this model has the greatest: its explanatory power, that is, the combination of *self-direction* and *power* with its materialism, explains 19.6% of the variance of **success** materialism dimension. Although a number of Schwartz values had a significant effect on material success in univariate models (see Table 34), in multivariate models, only the individualistic dimension met the expectations for estimation. The residuals of the model based on the collective value dimension did not follow a normal distribution, and there was no significant effect in the models involving self-transcendence (*performance, power*) and self-realization (*performance, power*) value sets.

39. Table: Multivariate OLS regression model of Schwartz-values on the **success** dimension of materialism

<i>Happiness</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj.</i> <i>R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i> <i>constant</i>	<i>t</i>	<i>t sig.</i>
Self-direction						-.201			-4.750	<.001
Power	.442	.196	.191	41.302	<.001	.327	2.922	13.355	8.864	<.001
Achievement						.067			1.436	.152

Source: own editing

The indicators summarized in Table 40 feature four multivariate models separated by the internal horizontal axes of the table. The four models, respectively, are the *collective*, *self-transcendence*, *self-enhancement*, and *conservation*. The residuals of the calculation made with the *individualistic* and the *openness* (self-direction, stimulation) value sets did not follow a normal distribution. The *collective* value model explains 11.2% of the variance in attitudes toward acquisition **centrality**, although the effect of benevolence is not significant. The signs of its  $\beta$ -values are interesting because while the importance of *universalism* and *tradition* reduces the acquisition-centred attitude, *security* actually increases it. The effect of the *self-transcendence* value set is very weak with 5.3%, moreover, the effect of the benevolence value is not significant. The same is true of *conservation* (security and tradition) however, both of its independent variables show a significant effect: as security increases, the importance of tradition reduces the desire to acquire goods. Of the independent variables (power and achievement) in the value pair of *self-enhancement*, only the effect of power is significant, but the model is still 10.7% responsible for the development of the dependent variable. In fact, this value pair can also mean the *individualistic* value dimension.

40. Table: Multivariate OLS regression model of Schwartz-values on the **centrality** dimension of materialism

<i>Centrality</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	$\beta$ <i>independent</i>	$\beta$ <i>constant</i>	<i>t</i> <i>constant</i>	<i>t</i>	<i>t sig.</i>
Universalism						-0.221			-4.475	<.001
Security	.335	.112	.105	16.012	<.001	.227	4.690	19.281	5.386	<.001
Tradition						-0.092			-2.401	.017
Benevolence						-0.072			-1.389	.165
Universalism	.231	.053	.050	14.351	<.001	-0.200	5.006	21.906	-4.210	<.001
Benevolence						-0.010			-1.188	.851
Power	.328	.107	.104	30.684	<.001	.256	3.180	17.997	7.118	<.001
Achievement						-0.022			-0.524	.600
Security	.224	.050	.047	13.498	<.001	.126	4.068	19.269	3.216	.001
Tradition						-0.173			-4.698	<.001

Source: own editing

Based on the univariate and multivariate regression models of Schwartz values, hypotheses 1 and 2 can be supported: *individualistic* (H1a) and *self-enhancement* values (H1b) reinforce materialism, while *collective* values (H2a) and *self-transcendence* values (H2b) attenuate it.

In the regression model estimating the joined effect of the three materialism dimensions on **voluntary simplicity**, only the effect of *centrality* is significant (constant = 7.159,  $\beta = -0.593$ , t sig. < 0.001), but the relationship is not suitable for interpretation despite the high explanatory power ( $R^2 = 0.249$ ).

*Individualistic* values explain 15.8% of the variance in **voluntary simplicity** (Table 41). Of the five values, the explanatory power of encouragement and hedonism is not significant. Considering the sign of  $\beta$ -values, it can be concluded that self-direction and achievement increase, while *power* reduces the attitude to voluntary simplicity.

The effect of *collective* values on **voluntary simplicity** ( $R^2 = 0.327$ ) is the strongest of the multivariate regression models, although the explanatory effect of two independent variables, conformity and security, is not significant. Since the sign of all significant  $\beta$ -values is positive, it can be concluded that the collective value dimension enhances the intention of voluntary simplification.

Summarizing the uni- and multivariate regression analysis, it can be concluded that universalism and benevolence as the elements of self-transcendence value set reinforce the intention of voluntary simplification in both (uni- and multivariate) models, thus H3a has been supported. Among the collective values, conformity has a significant effect on simplification in the univariate model, but no longer in the multivariate model, however, tradition exerts its explanatory effect in the multivariate procedure. However, due to the negative sign of safety, Hypothesis 3b can only be partially supported.

41. Table: The effect of individualistic and collective value dimensions on voluntary simplicity

<i>Voluntary simplicity</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	<i>F</i>	<i>F sig.</i>	<i>β independent</i>	<i>β constant</i>	<i>t constant</i>	<i>t</i>	<i>t sig.</i>
Self-direction						.327			6.296	<.001
Power						-.203			-4.867	<.001
Achievement	.397	.158	.149	18.974	<.001	.176	3.167	11.339	3.253	.001
Hedonism						-.013			-.223	.824
Stimulation						.005			.125	.900
Universalism						.462			.437	<.001
Tradition						.126			.127	.003
Benevolence	.572	.327	.321	49.337	<.001	.106	1.415		.093	.048
Conformity						.078			.066	.103
Security						-.025			-.024	.573

Source: own editing

Of the endpoints of the perpendicular axes of the Schwartz circumplex, only the regression model involving *self-enhancement* (power and achievement) cannot be interpreted due to the non-normal distribution of error terms. However, 30.4% of the standard deviation of **voluntary simplicity** ( $F = 111.600$ ,  $p < 0.001$ ) in the circumplex is explained by a positive  $\beta$ -value (universalism = 0.518,  $t \text{ sig} = < 0.001$ ; benevolence = 0.110,  $t \text{ sig} = 0.037$ ), so *self-transcendence* stimulates the need for voluntary simplification.

Similarly, a positive (safety  $\beta = 0.182$ ,  $t \text{ sig} = < 0.001$ ; tradition  $\beta = 0.312$   $t \text{ sig} < 0.001$ ) relationship can be demonstrated for the *conservation* (security and tradition) value set. Beside the normal distribution of residuals, 15.4% of the regression model ( $F = 46.405$ ,  $p < 0.001$ ) explains the variance of voluntary simplicity.

Overall, the prosocial value preferences (e.g., self-transcendence) of adolescents' personalities reinforce consumer behaviour towards simplification. Values that reflect an individual's openness to change also contribute to a simpler consumer lifestyle. In line with this, the values of conservation have also been shown to support simplification, so not only adherence to and respect for traditions and a desire for a secure, stable environment, but also a 'less is more', a satisfied, undesirable attitude.

## 14. SUMMARY CHAPTERS ANSWERING RESEARCH QUESTIONS AND CONCLUSIONS

### 14.1. Answering research questions and conclusions

Based on the statistical analysis of the sample from the national data sampling, the results of the hypothesis tests are summarized in the table below:

42. Table: Summary of hypothesis testing

Number of hypothesis	Statement	Result
H1a	<i>Individualistic values strengthen material attitudes.</i>	supported
H1b	<i>Values expressing self-enhancement strengthen material attitudes.</i>	supported
H2a	<i>Collective values weaken material attitudes.</i>	supported
H2b	<i>Self-transcendence values weaken material attitudes.</i>	supported
H3a	<i>Values for self-transcendence have a positive effect on identification with voluntary simplicity.</i>	supported
H3b	<i>Prosocial values for community well-being have a positive effect on identification with voluntary simplicity.</i>	partially supported
H4	<i>Materialism is negatively related to voluntary simplicity.</i>	supported
H5a	<i>Among the motivations for social media use, self-extension has a positive effect on materialism.</i>	supported
H5b	<i>Among the motivations for social media use, observation of others has a positive effect on materialism.</i>	rejected
H6	<i>The frequency of visual social media use is positively correlated with materialism.</i>	supported
H7a	<i>Students in general secondary education are less material compared to students in secondary vocational education.</i>	partially supported
H7b	<i>Students in general secondary education are less material compared to students in vocational education.</i>	partially supported
H8a	<i>Voluntary simplicity is more important for students in general secondary education, than students in secondary vocational education.</i>	supported
H8b	<i>Voluntary simplicity is more important for students in general secondary education, than students in vocational education.</i>	supported
H9	<i>Young people living in regions with better economic conditions are less material than those living in regions with worse economic conditions.</i>	rejected
H10	<i>Young people living in regions with better economic conditions are less likely to identify with voluntary simplicity than those living in regions with worse economic conditions.</i>	partially supported

Source: own editing



Based on the statistical analysis of the national sample, the research questions of the dissertation can be answered as follows:

- 1) *What values relate to materialism? Which values strengthen and which weaken materialism?*

According to the data analysis for H1 and H2, power, achievement, stimulation and self-direction show significant explanatory power as individual independent variables, but in a multivariate model only power and self-direction have a significant impact on materialism. At the same time, from the self-enhancement value set, power is the value that best strengthens the attachment to material goods. Among the collective values, the negative effects of universalism, tradition, benevolence and security are significant individually, but in the multivariate model, benevolence is no longer significant. It can be stated that the happiness dimension of materialism - which is explained only by the self-enhancement value set - and success is relatively little influenced by values, but the centrality dimension is related to a wide range of values. In the theoretical approach of the present dissertation, the role of material goods can also be interpreted as a tool for individual well-being, social mobility, and coping strategy. Based on the above, it has also been proven that, in general, the desire for goods and expansion of consumption are not only the result of external influences, but of much deeper, internal motives. The wide range of values that explain the acquisition-centred attitude attests to this.

- 2) *What values relate to voluntary simplicity? Which values strengthen and which weaken voluntary simplicity?*

Taking into account research results universalism and benevolence as values of self-transcendence reinforce the intention of voluntary simplification both individually and in a multivariate model, thus H3a has been supported. Among the collective values, conformity has a significant effect on simplification in the univariate model, but no longer in the multivariate model. However, tradition exerts its explanatory power in the multivariate analysis. However, due to the negative sign of safety, hypothesis H3b is only partially supported in the end. If we accept that the pursuit of security is a part of the individual's coping strategy, then the voluntary simplicity-reducing effect of security further strengthens the assumption that the acquisition and possession of goods can strengthen an individual's self-determination and existence.

3) *What is the relationship between materialism and voluntary simplicity?*

One of the main questions of the dissertation is whether voluntary simplicity has a positive or negative relationship with materialism compared to the contradictory results in the literature. The assumption (H4) that materialism is negatively related to voluntary simplicity was examined from two directions in the dissertation. Regarding the dimensions of materialism (as independent variables), neither univariate nor multivariate regression models could confirm the hypothesis. Despite the strong and significant effect between the variables, the results do not prove the explanatory power of the material attitude due to the non-normal distribution of residuals. If we interchange the dependent and independent variables, all univariate models are interpretable and show a significant effect: voluntary simplicity negatively influences the strength of materialism. The answer to research question 3 is also confirmed by the significant correlations of the relationship studies (see page 156), so materialism is negatively related to voluntary simplicity.

4) *Does the motivation for social media use influence the strength of materialism?*

It can be determined from the meaning of the accepted Hypothesis 5a and the rejected Hypothesis 5b. that both the enhancement of happiness with material goods and the identification of success through material goods and the attitude towards the acquisition of new goods can be explained by the motivation for the self-extension on social media. That is, the more adolescents are willing to share self-created or self-depicting content, the more strongly they are attached to material goods in all three interpretations of materialism. However, the results did not fully support the hypothesis that passive, inclusive participation and monitoring the sharing of others would generally have an effect on materialism. This is because material success is explained only by the intention of self-extension, that is, this subset of materialism is independent of social comparison. Considering the sign of the independent variables of the regression models, it can be said that in terms of social comparison, the material happiness and success of teenagers is more influenced by the effect on others (self-extension), while the attitude towards acquisition and possession is more shaped by online social observations.

5) *What is the relationship between the frequency of use and preferences of different social media networks and materialism?*

A comparison of motivational factors across different portals has shown that self-extension and perceptions of others vary with the use of visual-based social portals (see page 142), so it is also implicit that more frequent use of Instagram, TikTok, and Twitter is a social comparison, strengthening the materialism of young people through its active (content-creating) and passive (inclusive) nature (H6).

More specifically, comparing materialism with the threefold frequency of use (never, infrequent, frequent) of each portal, it can be seen that young people's financial success and acquisition-oriented attitudes are lowest when they do not use Instagram and highest when they frequently use TikTok. Even the infrequent use of Twitter is associated with significantly above-average materialism, but this is because teenagers who rarely use Twitter also use other platforms intensively. Although Facebook, as materialism follows a similar pattern to other portals, may even question the conclusions about visual platforms, it is important to note that the frequent use of Facebook, like Twitter, is associated with an intensive use of other platforms. What underlines the importance of visual platforms is the material happiness, which shows a significant difference only in the case of Twitter and TikTok, but it is in these cases that we encounter the strongest materialism (see Figure 35).

6) *What is the relationship between school type and materialism?*

Although among the dimensions of materialism, only the happiness dimension differed significantly between the three school types, it can only be stated partially that material and material goods are less important to general secondary education students compared to other school types (H7a and H7b are partially supported). In addition, the happiness of secondary vocational education students is mainly due to the goods they own or will have to own. In this research result, there is a difference between the perspective-minded atmosphere of general secondary institutions, which encourages further learning, and the atmosphere of technical schools, which focuses on everyday living and urges an independent existence as soon as possible. At the same time, the results confirm the middle-way nature of the technical school type.

7) *Is there any difference between teenagers of different school types regarding voluntary simplicity?*

Yes, there is: differences similar to materialism (research question 6) can be identified and proved. While general secondary education students identify with the simplification approach above the sample average, students in vocational education institutions are less open to simplification than the average young person (H8a and H8b are supported). Those who attend to secondary vocational schools are again between the results of general secondary schools and vocational schools.

8) *Are there differences in terms of values and voluntary simplicity for teenagers living in regions with different economic conditions?*

There is no hypothesis for the evolution of Schwartz values by region because neither the research nor the literature had a precedent for the expected result. However, the differences can be identified without a hypothesis test. Regarding the income of households, the better economic circumstances of adolescents in Budapest and Central Hungary can be assumed compared to the national average. Of course, this does not mean that the richest young people live in this area or that all young people live in better financial conditions, but the averages are the starting points. It can be stated that the preference of all values showing significant differences among teenagers living in Budapest and Central Hungary is below the national sample. This is especially true of universalism, which is by far the lowest, but it is interesting that both security and independence are considered the least important. Of the regions, only the results of South Transdanubia are very similar to those of Central Hungary, despite the fact that the South Transdanubia region is one of the lowest-income regions. There is also a positive deviation from the sample average in the Western Transdanubia and Southern Great Plain regions, the identification of universalism, tradition and performance is particularly high in the former, which may be explained by cross-border employment, industrial clustering, and the historical development of the biggest cities in the region (Győr, Szombathely, Sopron, Kőszeg). An interesting fact is that while Western Transdanubia is the second (behind Central Hungary) out of the seven economic regions in the development of the average household income, the Southern Great Plain is only the fifth. Overall, it can be stated that the collective-conservative values are more important for adolescents in Western Transdanubia and the Southern Great Plain

than in other parts of the country. However, openness to change and self-fulfilment are also stronger in the two regions.

Identification with voluntary simplicity (Fig. 24) perfectly reflects the significant differences between Schwartz values. In other words, young people in the Western Transdanubia and Southern Great Plain regions are much more open to moderate, small-scale and simple consumer behaviour than the national average whereas in Central Hungary and Southern Transdanubia the opposite is true. These results also confirm the relationship between voluntary simplicity and collective values.

In summary, the question of whether value preferences differ in regions with different economic circumstances cannot be given a clear answer. Although the difference between the regions can be proved, the regions above (Western Transdanubia and Southern Great Plain) and under-represented (Central Hungary and Southern Transdanubia) show different income situations compared to the national average. Therefore, the reason for the difference is not to be found in economic development. The same is true of voluntary simplicity, as the partial acceptance of hypothesis H10 (see page 131) further strengthens - but has not yet proven - the likelihood that simpler consumer life, behaviour, and small-scale consumption are not related to financial means.

*9) Is there a difference in terms of materialism between adolescents living in regions with different economic conditions?*

To answer this question, minimal but significant differences can be considered (Figure 20), from which conclusions similar to the regional differences in values and voluntary simplification can be derived. The level of materialism in the Western Transdanubia and South Transdanubia regions is lower than the national average, which does not mean a difference between the households' economic conditions of the regions in terms of materialism (H9 is rejected) therefore the answer to research question 9 is no. At the same time, the result reinforces the negative relationship between materialism and collective values and voluntary simplicity, because collective values and identification with voluntary simplification are stronger than the national average in these regions (H10 is partially supported).

## 14.2. Conclusion

Based on the research results, it can be proved that materialism is positively related to individualistic values for individual prosperity and aspiration, while it is negatively related to collective, prosocial values. From all this we can conclude that the role of material goods is significant in the assessment of individual well-being, achievements, and that the attachment to goods weakens as social relations and community interests are strengthened.

Among the positive (Kuanr et al. 2020) and negative (Nepomuceno & Laroche, 2015) correlations between materialism and voluntary simplicity demonstrated in the literature, the present dissertation confirmed the existence of a negative relationship between the two variables. Compared to the values, it can be seen that the values of collective and self-transcendence are positively related to the intention to simplify. That is, small-scale consumer behaviour, the restriction of consumption of one's own volition, is related to the interests of the community, and the desire to transcend the current state of life.

Regarding social media use, the hypothesis that visualization-based platforms (e.g., Instagram, TikTok) are positively related to materialism has been confirmed. Considering the motivation to use, there is no difference between observing one's own content creation and sharing and observing the shares of others, both motivations are positively related to materialism. In other words, the intent to share and consume content in both social media can strengthen the attachment to goods.

Comparing value preferences and attitudes of teenagers in different school types, it has been proved that general secondary school students studying in an educational environment, which is typically prepared for higher education and further education, are less materialistic and more inclined to study technically. In conclusion, it is not only in terms of general knowledge (general secondary school) and vocational (vocational school) studies that secondary vocational schools are midway between the two extremes in terms of materialism and voluntary simplicity. Finally, it can be said that the income and wealth situation resulting from the level of economic development of the regions has no effect on the development of materialism, values or voluntary simplicity. This correlation draws attention to the fact that the studied variables are

more deeply rooted phenomena; they are not influenced by the income situation per se.

### **14.3. Practical contribution of the dissertation**

Although the aim of the dissertation is fundamentally a theoretical contribution to marketing knowledge, and the examined system of relations is rather theoretical and abstract, the results provide some practical advice. Among those born between 2003 and 2007, moderate materialism, a struggle between individualistic and collective values, and a desire for voluntary simplicity are recognizable. It follows from all this, and from the direction of the relationships between the variables, that a social stratum that is soon to join the commodity market with an independent income and existence can be fundamentally open to simplification and, through the strengthening of collective values.

Voluntary simplification is a prerequisite for a more sustainable, socially just and environmentally conscious consumer society. Although in a more responsible consumer society, needs are still met through goods and services, consumers are able to curb their hedonistic consumer desires, they do not seek happiness and satisfaction in acquiring more and more goods.

The openness of adolescents to voluntary simplicity is a useful research result primarily for marketers aiming at consumer awareness and responsibility. Political, social and economic decision-makers can also find useful results in the dissertation. For them, a symbol system that can be grasped by teenagers through their value preference can be especially useful. We can conclude that benevolence, hedonism, independence, and security are the most important of the individualistic and collective values.

### **14.4. Future recommendations**

National research with a large sample played a central role in the dissertation. Data analysis provided several lessons. It would be important to perform a psychometric examination of the Richins scale with Hungarian-language scales, involving statisticians, because neither the happiness nor the success dimension results in acceptable indicators in complex statistical studies.

It is also worth reviewing the Schwartz set of values in all future cases and collecting methodological recommendations because the statements for each value in the entire test are indeed contradictory or ambiguous; for young people only one statement is applicable.

Voluntary simplicity is explained by value preferences rather than materialism, and further research may be worthwhile in this context.

With regard to social media, it would be useful to propose the recognition of social platforms as a scene of socialization through a comprehensive study. This would be particularly important and timely in view of the fact that meta-versions are now available in which all needs can be met and almost complete experiences can be collected through a virtual avatar, in addition to physiological needs.



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# Appendix

## Appendix 1

### Richins-Dawson Materialism Value Scale

#### **How true the following statements are for you?**

*1 = not at all; 7 = completely*

1. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.
2. I like a lot of luxury in my life.
3. My life would be better if I owned certain things I don't have.
4. Buying things gives me a lot of pleasure.
5. I usually buy only the things I need.
6. I'd be happier if I could afford to buy more things.
7. I don't place much emphasis on the amount of material objects people own as a sign of success.
8. I have all the things I really need to enjoy life.
9. I like to own things that impress people.
10. I don't pay much attention to the material objects other people own.
11. Some of the most important achievements in life include acquiring material possessions.
12. I put less emphasis on material things than most people I know.
13. The things I own say a lot about how well I'm doing in life.
14. I admire people who own expensive homes, cars, and clothes.
15. I wouldn't be any happier if I owned nicer things.
16. I enjoy spending money on things that aren't practical.
17. I try to keep my life simple, as far as possessions are concerned.
18. The things I own aren't all that important to me.

## Appendix 2

Schwartz-values

### **How true the following statements are for you?**

*1 = not at all; 6 = completely*

1. Thinking up new ideas and being creative is important to him.
2. It is important for him to be rich.
3. He thinks it is important that every person in the world be treated equally.
4. It is very important for him to show his abilities.
5. It is important for him to live in secure surroundings.
6. He likes surprises and is always looking for new things to do.
7. It is important for him to be in charge and tell others what to do.
8. It is important for him to listen to people who are different from him.
9. He thinks it's important not to ask for more than what you have. Having a good time is important to him.
10. It is important for him to make his own decisions about what he does.
11. It's very important for him to help the people around him.
12. Being very successful is important to him.
13. It is very important for him that his country be safe from threats from within and without.
14. He looks for adventures and likes to take risks.
15. It is important for him always to behave properly.
16. He believes that people should do what they're told.
17. It is important for him to be loyal to his friends.
18. He strongly believes that people should care for nature.
19. Religious belief is important to him.
20. He seeks every chance he can to have fun.

## Appendix 3

### Voluntary simplicity scale

#### **How true the following statements are for you?**

*1 = not at all; 7 = completely*

1. I believe in material simplicity, i.e., buying and consuming only what I need.
2. I believe in “small is beautiful” e.g., I prefer smaller cars over large cars.
3. I believe that product function is usually more important than its style.
4. I am interested in personal growth than economic growth.
5. I am determined to have more control over my life as a consumer, e.g., stay away from installment buying.
6. I consider myself ecologically responsible.

## Appendix 4

Frequency of social media use

**How often do you use the following social network sites?**

	Never	Very rarely	Weekly	Daily
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TikTok	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix 5

Uses & Gratifications-scale

**How strongly do you feel the following motivations when using social media (Facebook, Instagram, Tiktok, etc.)?**

*1 = not at all; 7 = completely*

1. to interact with my friends.
2. to see “visual status updates” of my friends.
3. it is fun.
4. to follow my friends.
5. to see what other people share.
6. to “like” my followers' photos.
7. to depict my life through photos.
8. to creep through other people's posts.
9. to remember special events.
10. to share my life with other people.
11. to document the world around me.
12. to commemorate an event.
13. to remember something important.
14. to become popular.
15. it is cool.
16. to self-promote.
17. to provide “visual status updates” for my friends.
18. to find people with whom I have common interests.
19. to create an art.
20. to show off my photography skills.